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BIENNIAL REPORT

OREGON STATE HIGHWAY COMMISSION

1967
1968

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TWENTY-EIGHTH BIENNIAL REPORT

OF THE

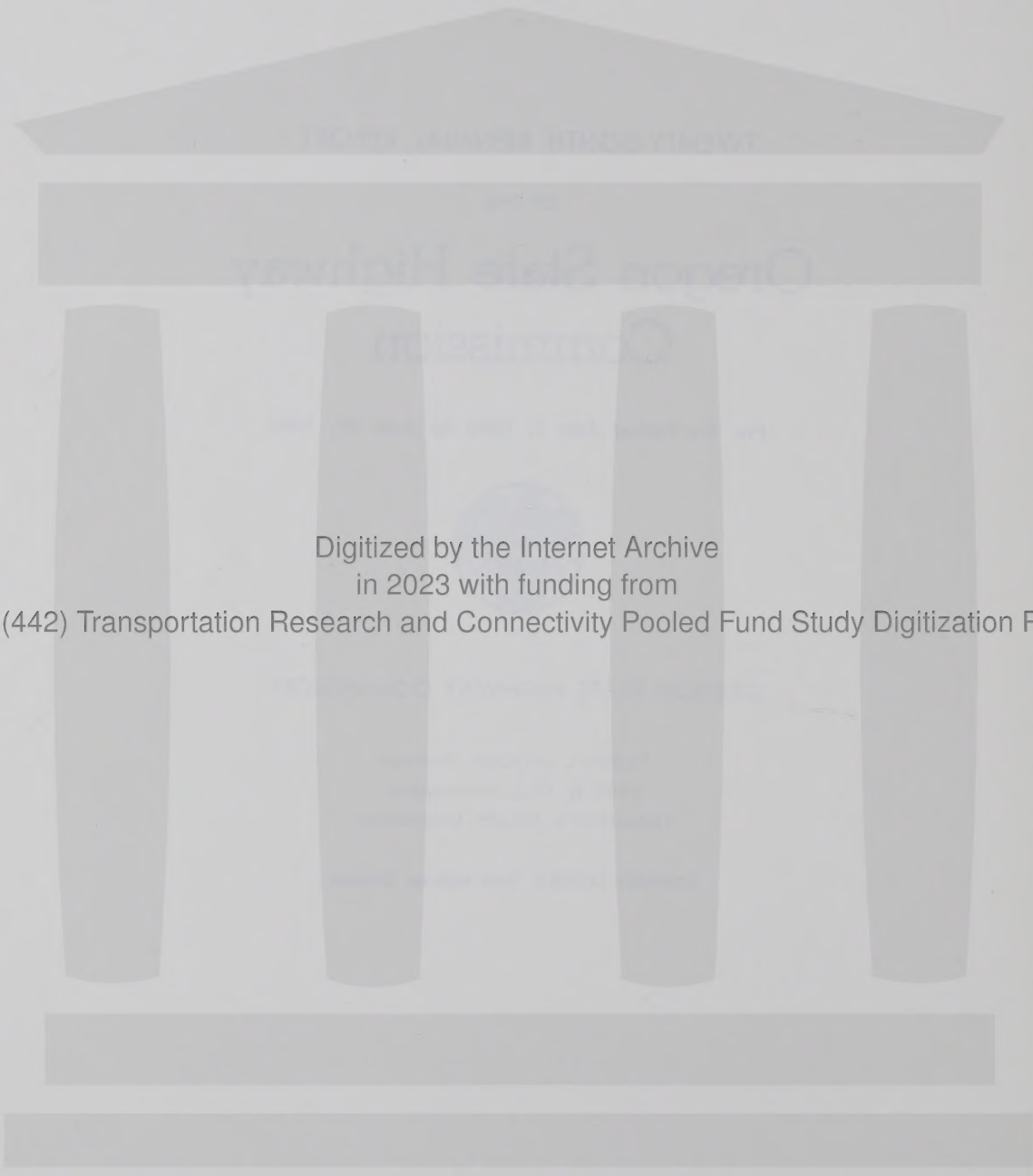
Oregon State Highway Commission

For the Period July 1, 1966 to June 30, 1968

OREGON STATE HIGHWAY COMMISSION

GLENN L. JACKSON, Chairman
FRED W. HILL, Commissioner
THADDEUS B. BRUNO, Commissioner

FORREST COOPER, State Highway Engineer



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STATE OF OREGON
STATE HIGHWAY DEPARTMENT
SALEM 97310

Salem, Oregon
July 1, 1968

HONORABLE TOM McCALL,
Governor of the State of Oregon.

Dear Sir:

In compliance with the provisions of ORS 366.485, we submit herewith the report of the Oregon State Highway Commission for the period from July 1, 1966 to June 30, 1968.

Respectfully yours,

OREGON STATE HIGHWAY COMMISSION,

Glenn L. Jackson, Chairman
Fred W. Hill, Commissioner
Thaddeus B. Bruno, Commissioner

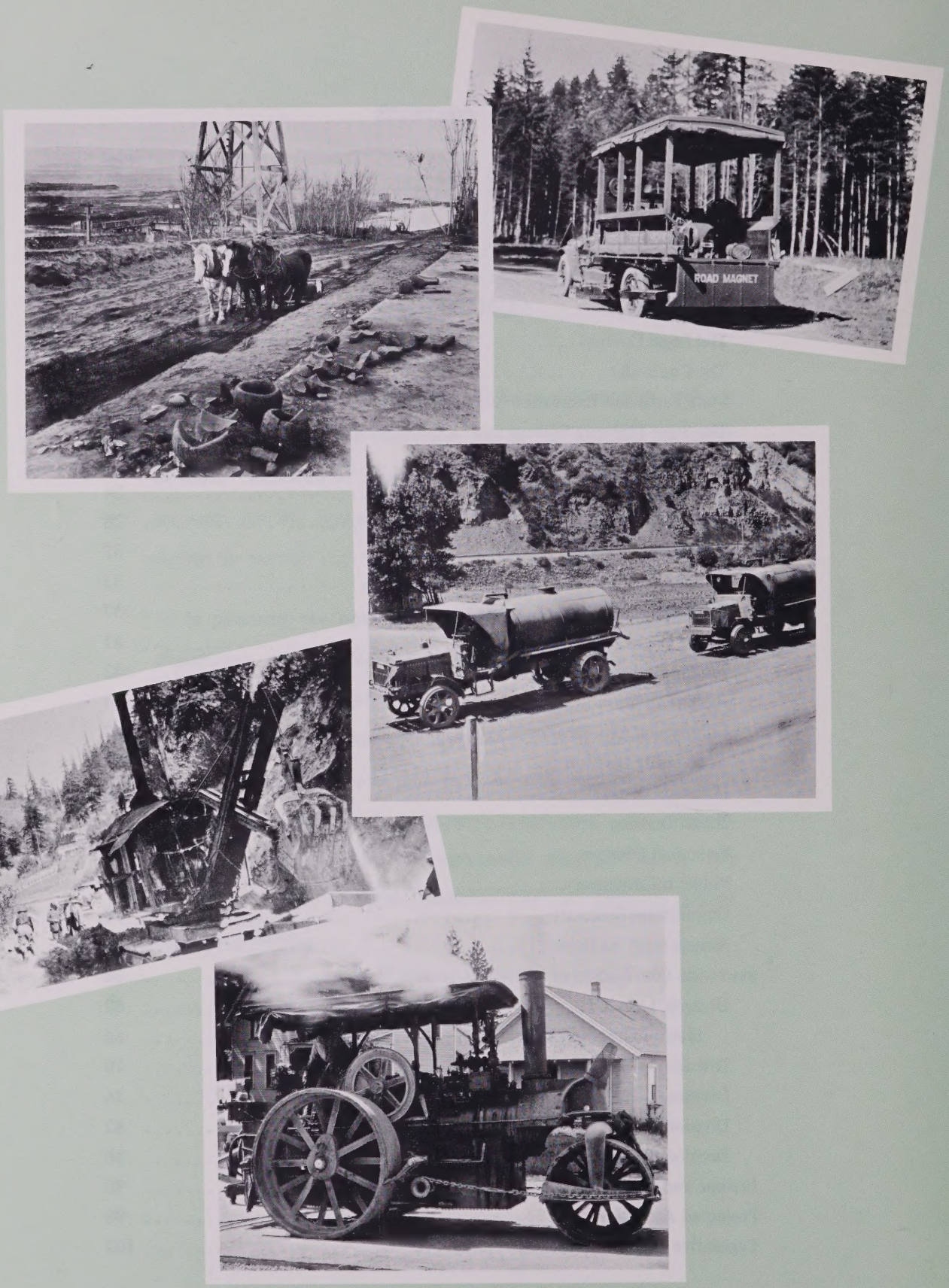
FOREWORD

Oregon law provides that the Highway Commission make a biennial report to the Governor which, in addition to other pertinent information, explains the work accomplished and accounts for the revenues received and the disbursements made during the period.

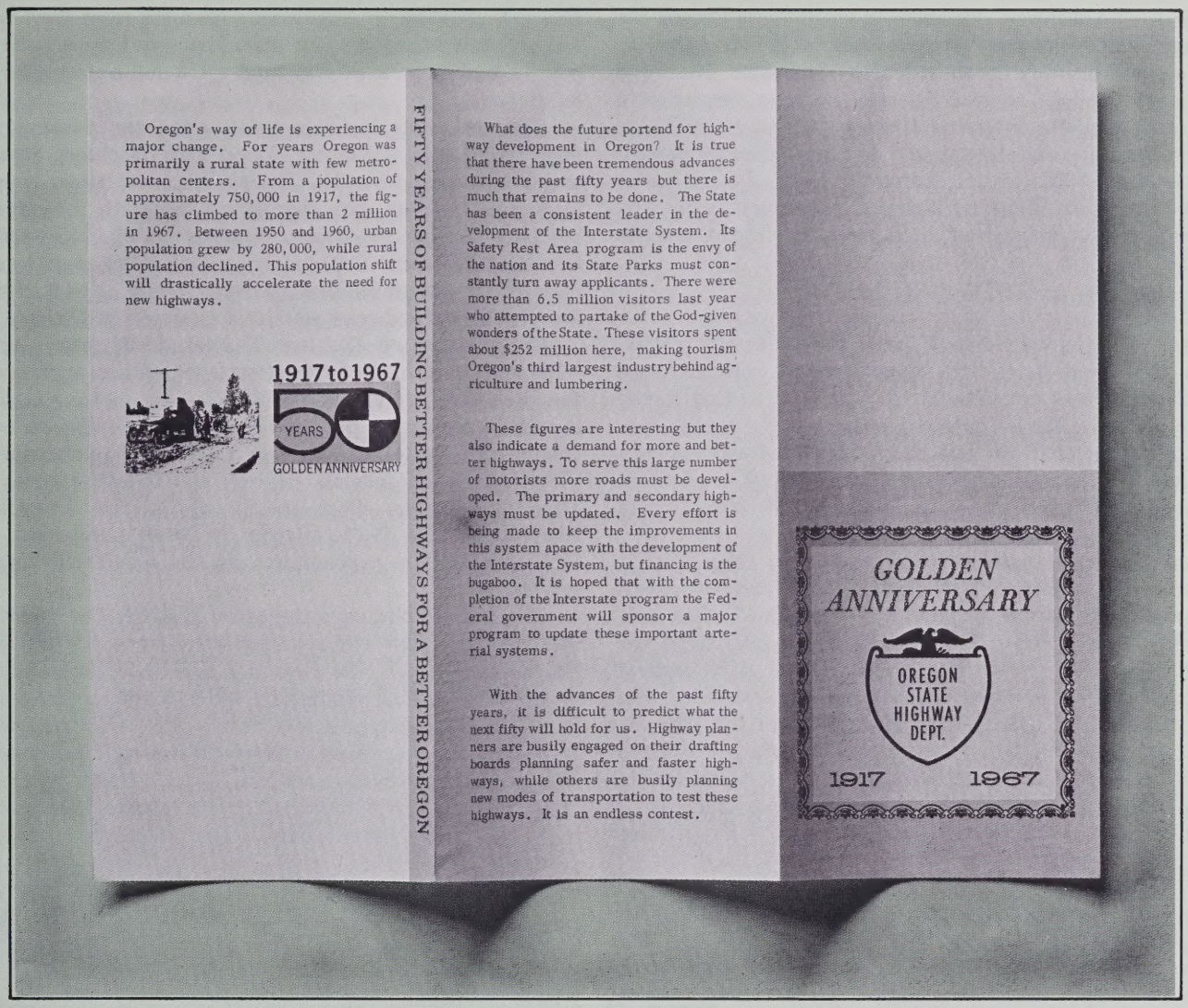
In preparing the report, it has been the aim of the Highway Department to assemble the data in a style that will permit anyone to quickly obtain a perspective of the condition of Oregon's Highway System. To accomplish this, a simple approach with appropriate graphical and pictorial data has been used. In addition to fulfilling the statutory requirement, the Highway Commission has provided an instrument that will permit any person to obtain a better understanding of Oregon's general highway problems.

CONTENTS

	Page
History	6
Organization	12
State Highway Commission	13
Engineering	13
The Secretary	14
The Legal Counsel	14
The Controller	14
State Parks and Recreation	14
The State Highway System	14
Division Reports	22
Legal and Right of Way Division	24
Construction Division	28
Bridge Division	32
Maintenance Division	33
State Parks and Recreation Division	37
Office Engineering Division	41
Traffic Engineering Division	42
Permits Division	44
County and City Division	47
Accounting Division	50
Materials Division	50
Travel Division	52
Personnel Division	54
Public Information	57
Commission Secretary	58
Management Analysis	58
Statewide Distribution of Highway Contract Work	60
Division 1	62
Metropolitan Section	66
Division 2	70
Division 3	76
Division 4	82
Division 5	86
Income and Expenditures	90
Projected Activities	98
Legislative Recommendations	102



The "modern" equipment of early-day highway construction.


Oregon's way of life is experiencing a major change. For years Oregon was primarily a rural state with few metropolitan centers. From a population of approximately 750,000 in 1917, the figure has climbed to more than 2 million in 1967. Between 1950 and 1960, urban population grew by 280,000, while rural population declined. This population shift will drastically accelerate the need for new highways.
1917 to 1967
50
YEARS
GOLDEN ANNIVERSARY
FIFTY YEARS OF BUILDING BETTER HIGHWAYS FOR A BETTER OREGON
What does the future portend for highway development in Oregon? It is true that there have been tremendous advances during the past fifty years but there is much that remains to be done. The State has been a consistent leader in the development of the Interstate System. Its Safety Rest Area program is the envy of the nation and its State Parks must constantly turn away applicants. There were more than 6.5 million visitors last year who attempted to partake of the God-given wonders of the State. These visitors spent about $252 million here, making tourism Oregon's third largest industry behind agriculture and lumbering.
These figures are interesting but they also indicate a demand for more and better highways. To serve this large number of motorists more roads must be developed. The primary and secondary highways must be updated. Every effort is being made to keep the improvements in this system apace with the development of the Interstate System, but financing is the bugaboo. It is hoped that with the completion of the Interstate program the Federal government will sponsor a major program to update these important arterial systems.
With the advances of the past fifty years, it is difficult to predict what the next fifty will hold for us. Highway planners are busily engaged on their drafting boards planning safer and faster highways, while others are busily planning new modes of transportation to test these highways. It is an endless contest.
GOLDEN ANNIVERSARY
OREGON STATE HIGHWAY DEPT.
1917 1967

HISTORY

INTRODUCTION

The year 1967 marked the fiftieth anniversary of the Oregon State Highway Commission. Throughout these fifty years development of Oregon's highways has far surpassed the most imaginative dreams of the engineers who pioneered the system.

The years following formation of the Highway Commission were very fruitful ones and resulted in many achievements for that time. In 1916, outside of Multnomah, Clatsop and Jackson Counties, there were no paved sections of highways in Oregon. With the exception of a few roads in the more advanced counties, gravel roads were rough and narrow. There was no continuity of improved roads between counties, and frequently impassable gaps in the road system at county lines were found. The Columbia River Highway was a dirt road from Astoria to Hood River; the Mt. Hood Loop was only a dream; and the Pacific Highway was a mud bog and impassable after the first rain, as were all roads leading to the coast.

The route to Pendleton from the Willamette Valley was a circuitous route over mountains, involving long, steep grades. By 1926, the state highway system totaled 4,469 miles, of which improvements made to that date totaled: 897 miles of paved roadway; 576 miles of oiled roadway; 1,747 miles of all-weather stone surfacing; 301 miles of graded roadbed; and 948 miles of unimproved roadway. These improvements did not include the work performed by the Bureau of Public Roads on forest highways or work by the counties.

During those early years, Oregon was a leader in highway improvements, as we still are today. The completion in 1922

of the Pacific Highway, 345 miles in length, gave Oregon the distinction of being the first state west of the Mississippi to have a paved highway the entire length of the state. The era of multilane, divided, controlled-access freeways began when Congress passed the Interstate Highway Act in 1956. Today Oregon has completed Interstate 5 and more than 60 percent of Interstate 80N. Oregon currently leads the nation in completion of its interstate highway system and is the first state to have completed an interstate route from border to border.

HISTORICAL FACTS

Back in the "good old days", when Oregon became a state, public roads were being built by each county within its own boundaries. It was not unusual for a traveler to find a road ending abruptly, for no apparent reason, at the county line. The traveler then had a choice. He could turn around and try a new route, or he could strike off across country in search of another road in the next county. This was only one of many problems facing the first state legislators.

One of the first laws involving road improvement concerned the maintenance of existing roads. This law, passed by the 1860 legislature, required that every able-bodied male between 21 and 50 years of age spend two days each year working on roads in his district. If an individual did not appear for work on the appointed day without good cause, he was fined; or, if he failed to pay, he was thrown into jail. Later, in 1899, a law was passed requiring all able-bodied persons held in county jails to work on public roads. If a prisoner refused to work, he was put on a bread-and-water ration until he had a change of heart. In any event, he was required to make up for time lost from his road work.

It was not until 1913 that a State Highway Commission was created to co-ordinate the work done by county road districts and to build a system of state highways. The first Highway Commission consisted of Governor Oswald West, Secretary of State Ben Olcott and State Treasurer Thomas Kay, with the State Highway Engineer as administrator. Major Henry L. Bowlby, an engineering graduate from West Point, was appointed Oregon's first State Highway Engineer. He was given a budget of $250,000 from a 1/4-mill state tax levy to build roads.

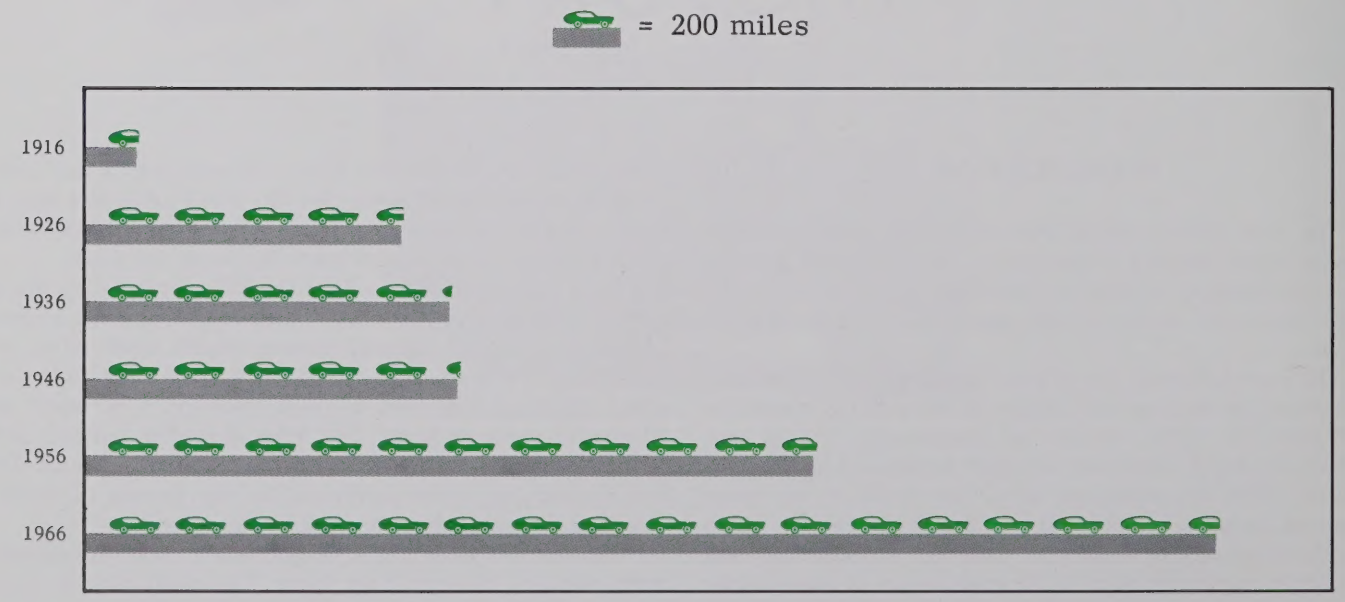
The first state highway construction expenditures were made in Clatsop, Columbia, Hood River, Jackson, Sherman and Washington Counties. During this same time, counties were also building and improving roads with money from bonds sold under the County Bonding Act of 1913. In those beginning years, the Department assisted counties in development of an over-all uniform system of roads, as well as in the location, design and construction of roadways and bridges.

Congress passed the first Federal-Aid Highway Act in 1916. Oregon's share of these first federal funds, appropriated for fiscal year 1917, was $78,700. This money, used for approved post road projects, was matched with an equal amount of state funds. The 1969 fiscal year apportionment is $79,935,000, an increase of over one-thousand times the original allocation. Since passage of the first Federal-Aid Highway Act in 1916, Oregon has been reimbursed over $760,000,000 for expenditures on the federal-aid highway system.

The law establishing a three-man Highway Commission as we know it today was approved by Governor Withycombe February 19, 1917. The Governor appointed Commissioners Simon Benson, W. L. Thompson and E. J. Adams for terms of three, two and one years, respectively. They were empowered to sell six million dollars in bonds to construct highways. In addition, the Commission adopted a state highway system and provided for a program of market road construction. At that time, only a few miles of roads near areas of concentrated population centers were paved.

Interesting comparisons may be drawn between those early years and the present. The standard design established by the Commission in 1917 called for a state-wide paved highway system, sixteen feet in width. Today, fifty years later, this system comprises 7,600 miles of paved primary and secondary highways, all exceeding the 1917 standard.

MILES OF PAVED ROADWAY IN OREGON
(Portland Cement and Asphaltic Concrete)



State revenue for highway purposes in 1917 came from a 1/4-mill state tax fund. Today, this revenue is collected entirely from motor vehicle revenue in the form of gasoline and diesel fuel tax, license fees, motor carrier fees and traffic fines. Motor vehicle revenue collected to date for highway purposes, after collection expenses of the Motor Vehicle Department and refunds for nonhighway use, amounted to more than $1,500,000,000. Of this amount approximately $386,500,000 has been distributed to counties and cities for use on roads within their jurisdiction.

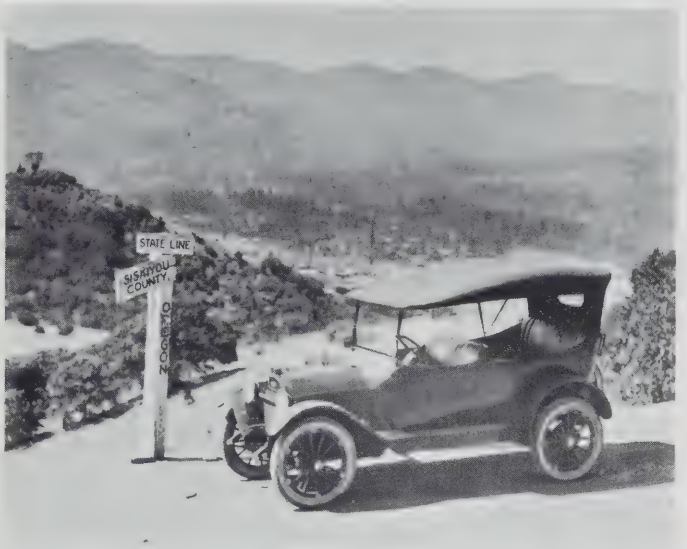
In 1917, expenditures amounted to $944,000, the major portion of which was used for construction. Seventy-nine employees handled the Highway Department's operations that first year. In contrast, expenditures by the Commission for fiscal year 1968 are estimated to be $140,000,000. The major portion is still allotted to construction improvements. The Commission's responsibilities have changed from advisors to counties and overseers of construction of an improved highway system to the present widely diversified operation, including: construction and maintenance of a modern, everchanging highways system; traffic and safety control; construction, operation and maintenance of the finest state parks system in the country; travel information and promotion; cooperative endeavors with counties and cities; and operation of a state-wide radio system in cooperation with the State Police. Right-of-way acquisition and disposition has also become a major part of the operation; whereas, in 1917, all right of way was donated to the state for road-building purposes.

In 1917, assistance to counties was limited to design and preliminary engineering for construction of roadways and bridges. This assistance is still available today, as well as aid in construction of the federal-aid county road system. On this system, the state handles the contracting and construction of a project and shares the cost with the county and federal government.

During the early history of highway construction, all necessary legal counsel and services were furnished by the Attorney General's office. In 1919, the Legislative Assembly made provision for the Highway Commission to establish a Legal Division to handle the increasing needs for this service. In the same year, a testing laboratory was set up to test all material used in highway construction for conformance to specifications.

By 1920, need for a uniform signing system of Oregon's highways was apparent. During that year, the Pacific Highway was completely signed with permanent signs at all crossroads showing the direction and mileage to the nearest town, the nearest larger cities, and other major points of interest to the traveling public. Between crossroads, highway route markers were provided at regular intervals of approximately one mile. In addition, signing was underway on the Columbia River Highway, Tualatin Valley Highway and McMinnville-Tillamook Highway. In 1929, Oregon adopted a uniform system of warning and directional signing that was established for use throughout the United States.

Showing considerable foresight, the Highway Commission proposed legislation for protection of the natural scenic features of the highway system during the 1919-20 biennial period. To preserve the natural beauty for later generations, a proposal was established to plant trees and retain a belt of standing timber along highway right of way, and these scenic areas are still being enjoyed by the traveler today. Also proposed at that time was the development of campsites along the highways for recreational use. These sites were the forerunner of our park system that we enjoy today.



The Pacific Highway begins to take shape near Oregon City and at the Oregon-California state line marker.

The 1921 legislature authorized the Highway Commission to acquire park sites for development of a state parks system. In many instances these sites were donated to the state for park purposes by public-spirited citizens. In 1929, Sam Boardman was appointed the first State Parks Superintendent, and largely through his efforts and foresight, Oregon has built a state park system that is unequaled. Development of recreation areas, overnight camping sites, and picnic facilities has made Oregon a vacationer's paradise and has helped build the tourist industry to one of the three largest industries in the state. In 1966, the number of state parks and waysides totaled 201 and comprised 70,400 acres of land.

Roadside rest areas were also beginning to appear in the early 1920's, and drinking fountains were located in those areas possessing a source of pure water.

Constructing new alignment of the McKenzie Highway (US 126) in 1931.

Control of outdoor advertising was a problem in the early years as well as today. The Commission issued instructions in 1919 to remove all advertising signs within the highway right-of-way limits as provided by law.

Maintenance of highways through 1920 was a responsibility of the counties, with the state sharing in the cost of this operation. Beginning April 1, 1921, the state assumed more responsibility in the matter by taking over maintenance on all newly completed sections of highways. Snow removal operations by the state began in the winter of 1922-23. Prior to that time, snow on the road too deep for travel stopped traffic until warm weather cleared the highways.

Prior to 1929, Multnomah County handled details of road construction and maintenance of roads within its boundaries through their road department. On January 1, 1929, the first unit of this county's road system was transferred to the Oregon State Highway Commission. This section included the Interstate Bridge, which was completed by Multnomah County and Clark County, Washington, and opened to traffic in 1917.

In 1931 this section of the Willamette Highway was a narrow, winding dirt road.

The contract for the first bridge crossing of the six major waterways along the Oregon Coast Highway was awarded on January 16, 1930. The Rogue River Bridge north of Gold Beach was the longest and most expensive structure to be contracted on the state highway system up to that date. The total length of this structure was 1,898 feet and cost $653,000.

Structures crossing the remaining five waterways were contracted in 1934 and were completed two years later at a cost of $5,436,000. The original plans called for these structures to be toll bridges. The 1935 legislature passed a bill authorizing the Highway Commission to operate these bridges toll-free and to finance the construction with general revenue bonds.

The completion of these six bridges eliminated all ferry crossings along the Oregon Coast Highway except the Columbia River crossing at Astoria. The Astoria Bridge was completed in 1966, with a $24,000,000 bond issue appropriated by the 1961 legislature. The opening of the Astoria Bridge provided a vital link in the coastal highway.

In 1935, the thirty-eighth Legislative Assembly granted authority to the State Highway Commission to establish a Travel Information Bureau within the Highway Department for the purpose of attracting additional tourists to Oregon. This division was organized in 1935 and expended $44,500 for tourist promotion during the first biennial period of operation. The Travel Information Division was instrumental in adding more than $500,000,000 to the state's economy during the 1965-66 biennium.

During World War II construction of highways came to a halt, and efforts were concentrated on maintenance of the highway system. Due to the shortage of help, the Department turned to the women of Oregon to help in this emergency. The ladies turned out in force to drive trucks, operate heavy equipment and generally maintain the highways throughout the state for the duration of the war.

Due to increasing highway needs and lack of revenue to carry on a construction program large enough to keep up with these needs, the 1951 legislature authorized sale of $72,000,000 in general revenue bonds to finance a highway construction program. These bonds were used for improving highways throughout the state. Some of the more important projects constructed with this money were the Portland-Salem Expressway and the Banfield Expressway; reconstruction of narrow, winding sections of the Pacific, Oregon Coast, The Dalles-California and Columbia River Highways.

This bond program gave Oregon a starting point to modernize the state's system of highways. In September of 1956, when this bond program was almost completed, Congress passed a bill to construct 41,000 miles of interstate highways that will make it possible to travel from coast to coast without a stop for traffic signals. When this network of modern highways is completed, it will be possible to drive onto the Interstate highway in downtown Portland, Eugene, Salem, or almost any other city, and continue to almost any major city of America without an intersection or traffic signal. The present estimated cost of this system is 56.5 billion dollars. Oregon is still a leader in highway construction and presently ranks first in percent of interstate highways completed adequate for present-day traffic. The benefits gained in building a nationwide system of four-laned controlled-access highways are already apparent. The highways are designed to be the safest modern engineering can provide.

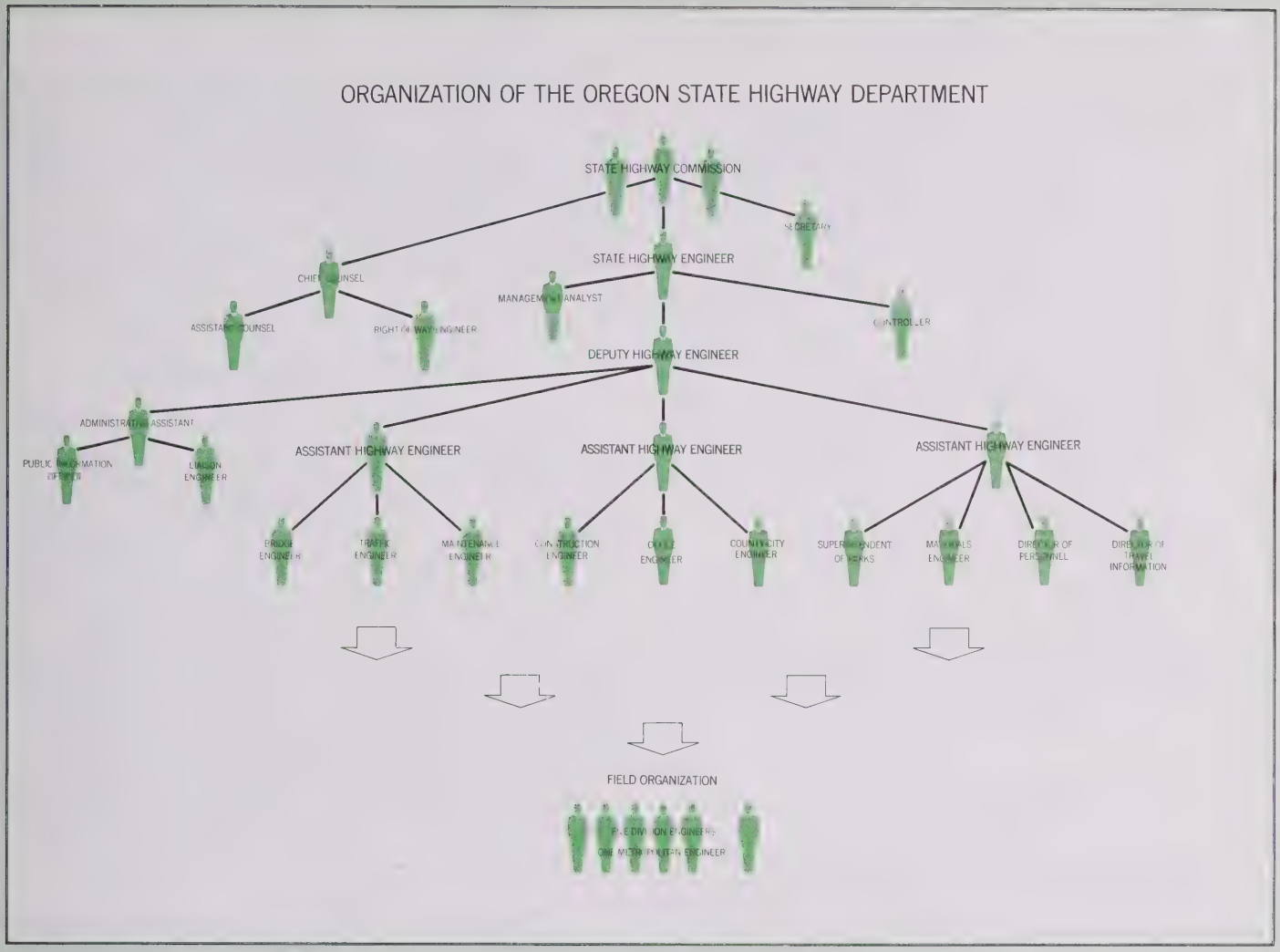
During World War II, the women of Oregon turned out in force to maintain the highway system.

E. J. Adams, Eugene ..... February 28, 1917, to March 31, 1918.
W. L. Thompson, Pendleton ..... February 28, 1917, to October 15, 1919.
S. Benson, Portland ..... February 28, 1917, to November 15, 1920.
R. A. Booth, Eugene ..... April 1, 1918, to May 28, 1923.
J. N. Burgess, Pendleton ..... October 16, 1919, to November 21, 1919.
E. E. Kiddle, Island City ..... November 26, 1919, to December 28, 1920.
J. B. Yeon, Portland ..... November 22, 1920, to March 31, 1923.
W. B. Barratt, Heppner ..... January 8, 1921, to March 27, 1923.
Wm. Duby, Baker ..... March 27, 1923, to July 31, 1927.
H. B. Van Duzer, Portland ..... April 1, 1923, to October 7, 1931.
W. H. Malone, Corvallis ..... May 28, 1923, to March 31, 1927.
C. E. Gates, Medford ..... April 1, 1927, to March 11, 1931.
Robert W. Sawyer, Bend ..... August 1, 1927, to May 28, 1930.
M. A. Lynch, Redmond ..... May 29, 1930, to August 1, 1931.
Chas. K. Spaulding, Salem ..... March 11, 1931, to February 16, 1932.
Wm. Hanley, Burns ..... August 1, 1931, to February 16, 1932.
J. C. Ainsworth, Portland ..... October 8, 1931, to February 16, 1932.
Leslie M. Scott, Portland ..... February 17, 1932, to March 31, 1935.
Carl G. Washburne, Eugene ..... February 17, 1932, to October 9, 1935.
E. B. Aldrich, Pendleton ..... February 17, 1932, to March 31, 1940.
F. L. Tou Velle, Jacksonville ..... October 9, 1935, to March 31, 1939.
Henry F. Cabell, Portland ..... April 1, 1935, to February 28, 1943.
Huron W. Clough, Canyonville ..... April 1, 1939, to April 7, 1943.
Herman Oliver, John Day ..... April 1, 1940, to March 31, 1943.
Merle R. Chessman, Astoria ..... April 8, 1943, to October 1, 1946.
T. H. Banfield, Portland ..... February 28, 1943, to March 31, 1950.
Arthur W. Schaupp, Klamath Falls ..... April 1, 1943, to March 31, 1949.
Ben R. Chandler, Coos Bay ..... October 1, 1946, to March 31, 1957.
Chas. H. Reynolds, La Grande ..... April 1, 1949, to March 31, 1958.
Robert B. Chessman, Astoria ..... April 1, 1957, to April 26, 1959.
M. K. McIver, Portland ..... April 1, 1950, to March 31, 1962.
Kenneth N. Fridley, Wasco ..... April 3, 1958, to March 31, 1967.
David B. Simpson, Portland ..... April 1, 1962, to March 5, 1968.

OREGON STATE HIGHWAY COMMISSION

Present Members

Glenn L. Jackson, Medford ..... appointed April 27, 1959
Fred W. Hill, Helix ..... appointed April 1, 1967
Thaddeus B. Bruno, Portland ..... appointed April 23, 1968



ORGANIZATION

STATE HIGHWAY COMMISSION

The three members of the State Highway Commission are appointed by the Governor for three-year terms, with each member's term expiring on March 31 of successive years. Upon expiration of a member's term, the Governor may either reappoint the incumbent or appoint a new member to the Commission. In the event of a vacancy for any cause, the Governor appoints a member to serve for the unexpired term. Oregon law provides that not more than one Commission member shall be appointed from any one Congressional district. Members of the Commission serve without pay; they are reimbursed only for those expenses incurred in the performance of their duties.

ENGINEERING

The State Highway Engineer, the chief administrative officer, is appointed by the Commission to serve at their pleasure for a period not to exceed four years without reappointment. The Commission, with the recommendation of the State Highway Engineer, appoints a Deputy and three Assistant State Highway Engineers. The State Highway Engineer, the Deputy and their assistants are required to be civil engineers, qualified by technical training and practical experience in highway engineering. Subject to the provisions of the State Civil Service law, the Commission has authorized the Highway Engineer to employ staff engineers, engineers and technical assistants, and other personnel as in his judgment may be necessary to conduct the business and activities of the State Highway Department.

Under the executive staff, the organization is subdivided into divisions and sections indicated on the organization chart. Field duties relative to the supervision, direction, maintenance and construction of state highways are delegated to five Division Engineers with headquarters at Portland, Salem, Roseburg, Bend and La Grande, and a Metropolitan Engineer located in the Portland metropolitan area.

Engineering services on construction projects are provided by resident construction engineers working under the supervision of the Division Engineers or the Metropolitan Engineer. Each resident engineer is placed in direct charge of one or

more contract jobs and is responsible for control of the contractor's operations to assure compliance with plans and specifications.

When highway location surveys are to be made, the Construction Engineer assigns a locating engineer to perform the work under the direct supervision of the Division Engineer.

Traffic control is directed by Division Traffic Engineers. They are responsible for investigation and recommendations for correction of dangerous intersections or sections of highways which are brought to their attention through study of accident records, traffic volume surveys, vehicle speeds and physical conditions.

Maintenance activities are directed by District Maintenance Superintendents; each superintendent is responsible for the work in a specific geographical district within each division. Working directly under the District Maintenance Superintendents are 129 section crews who perform routine maintenance duties. In addition, a varying number of extra gang crews are employed to perform special tasks, such as removing slides, patching pavements and repairing bridges.

The Maintenance Engineer supervises the operation of equipment shops and storerooms at Bend and La Grande, with the main shops and storeroom headquarters located at Salem. These shops service, repair and distribute equipment used by the Highway Department and manage the storage and distribution of various materials, supplies and parts as required.

THE SECRETARY

The Commission appoints a Secretary and an Assistant Secretary to hold office for a term of four years unless reappointed. The Secretary and his assistant keep a complete transcript of all meetings, actions and other Commission business; control and file all contracts, documents, minutes and other records of the Commission; and perform duties that normally come within the scope of this office.

THE LEGAL COUNSEL

The Commission, with the approval of the Attorney General, appoints a Chief Legal Counsel and Assistant Legal Counsel. They serve at the discretion of the Commission for terms not exceeding four years unless reappointed. The Legal Counsel, his assistant and their staff serve as legal advisors to the Commission, appear for and represent the Commission in all matters requiring the services of an attorney. The Legal Counsel is also responsible for acquisition of all real property.

THE CONTROLLER

The Controller is appointed by the Commission for a four-year term. He handles the fiscal affairs of the State Highway Department and is reappointed at the option of the Commission. The Controller and his staff audit, approve and register all claims for expenditures from the highway fund; and record all revenue received from the motor vehicle fund, cooperative projects, and the federal government through the Bureau of Public Roads.

STATE PARKS AND RECREATION

The Highway Commission has under its jurisdiction a Division of State Parks and Recreation. The State Parks Superintendent is appointed by the Commission to serve at their pleasure. The superintendent employs assistants and staff as required to properly administer and operate Oregon's state park system and recreation facilities.

The Commission also appoints, on recommendation of the State Parks Superintendent, a Director of Recreation to serve at their pleasure.

THE STATE HIGHWAY SYSTEM

The state highway system, composed of a network of primary and secondary highways selected by the State Highway Commission, includes those highways designated by the State Legislature. It comprises over 7,600 miles of roads which extend to every area of the state. In addition, the Highway Commission exercises certain jurisdiction on approximately 4,700 miles of county roads which are eligible to receive financial aid from the federal government. Nearly all of the state highway system is also on the federal-aid system, and a portion is also on the federal forest highway system. Roads making up the system are classified into several categories in order to meet eligibility requirements of the federal government in connection with federal-aid highway financing.

For the purpose of clarification and to indicate the distinction between such terms as "throughway", "freeway" and "expressway", definitions of these commonly used highway terms follow.

Control of Access—This is a condition where the right to enter or leave a highway is controlled by public authority. Access may be fully controlled, in which case preference is given to through traffic and all entrances or exits to the highway are permitted only at traffic interchanges. Access may also be partially controlled, in which instance preference is given to through traffic to a degree, with direct access and exit being permitted at designated locations. Oftentimes the type of use that may be made at designated access locations is specified.

Expressway—A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at intersections.

Freeway—A divided arterial highway for through traffic with full control of access and grade separations at intersections.

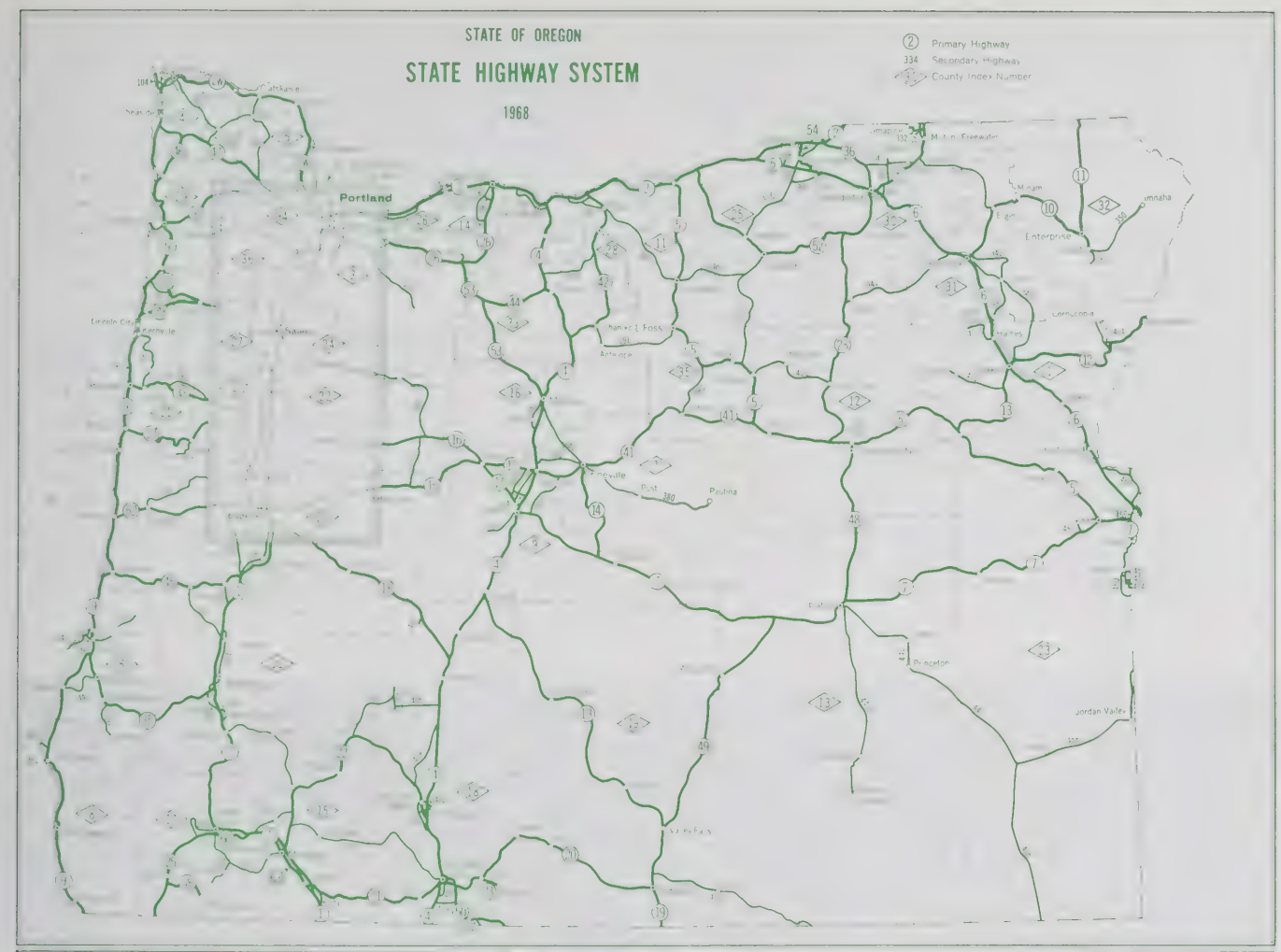
Throughway—This term is one of more local than national usage. In Oregon's case, the Highway Commission has designated, as is provided by law, certain of the state's highways as throughways. These highways comprise most of the state's primary highways and a few of the more important secondary highways. Our statutes define a throughway as a highway or street especially designed to handle through traffic and to which abutting landowners have limited or no rights of access. On Oregon's system all freeways are throughways, but many throughways are not freeways.

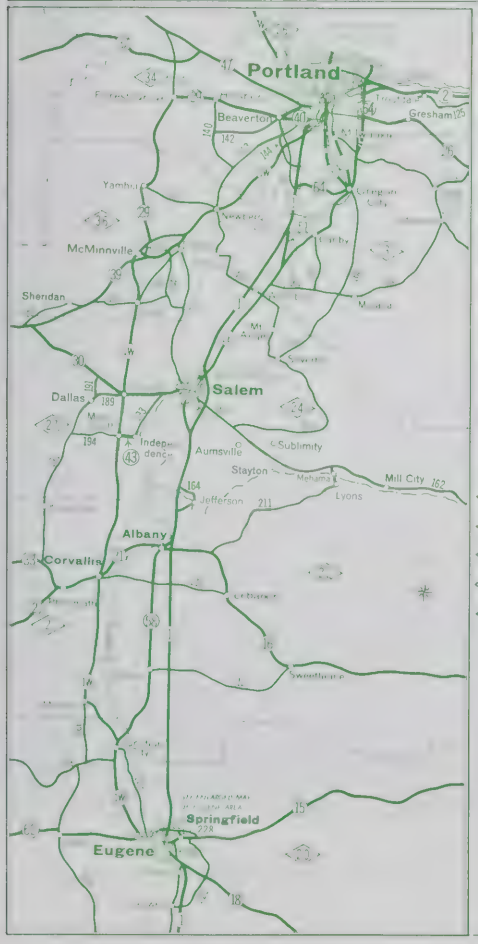
STATE OF OREGON

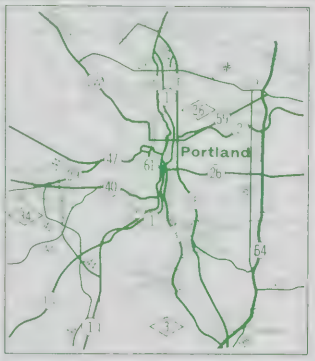
STATE HIGHWAY SYSTEM

1968

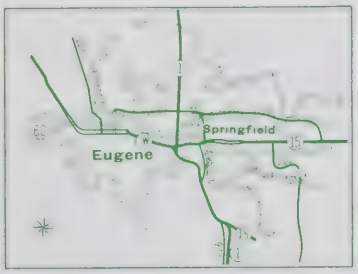
(2) Primary Highway
334 Secondary Highway
(3) County Index Number







ENLARGED MAPS OF THE WILLAMETTE VALLEY AND METROPOLITAN AREAS



COUNTY INDEX

1 BAKER	7 CROOK	13 HARNEY	19 LAKE	25 MORROW	31 UNION
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5 COLUMBIA	11 GILLIAM	17 JOSEPHINE	23 MALHEUR	29 TILLAMOOK	35 WHEELER
6 COOS	12 GRANT	18 KLAMATH	24 MARION	30 UMATILLA	36 YAMHILL

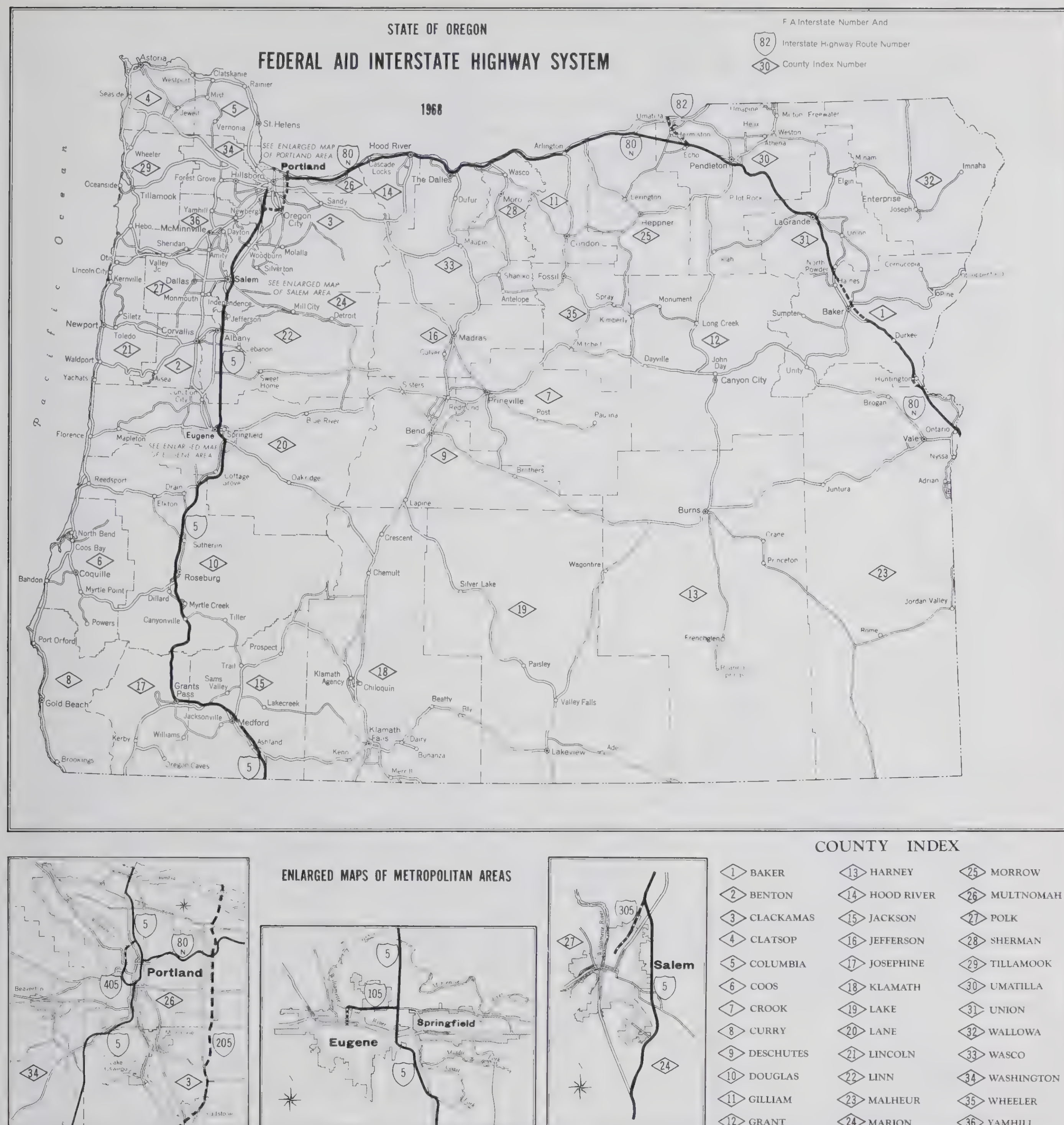
The highway system is divided into two fundamental parts known as primary highways and secondary highways. All highways over which the Highway Commission exercises complete control are on either the primary or the secondary network. Each is considered separately as follows:

Primary State Highways—These highways provide principally for through traffic movements or traffic that is moving from city to city as distinguished from that type of traffic whose origin and destination is in close proximity. The basic primary network is provided by statute and additions thereto are made by the legislature or the Highway Commission. Nearly all state primary highways are throughways. Those on the federal interstate and defense system are being constructed as freeways and some have been constructed as expressways.

Secondary State Highways—These highways are designed to provide for farm-to-market traffic, for feeder service to primary routes and for the type of traffic having more of a local characteristic than that using the primary routes. Additions, deletions or changes in the secondary system are by joint actions of the Highway Commission and the respective county court. The counties, however, do not bear any financial responsibility for either construction or maintenance on state secondary highways. The majority of secondary highways are not throughways nor are they constructed as freeways or expressways. In many cases, however, they are constructed on right of way with partial access control.

Federal-Aid Highways—Federal-aid highways are those selected by mutual agreement between the U.S. Bureau of Public Roads and the State Highway Commission to be placed on the federal-aid system. Such highways are eligible to receive funds for construction which have been authorized by the various federal-aid highway acts. These acts of Congress make certain sums available for interstate and defense highways, for primary highways, for secondary highways and for the extensions of the primary and secondary highways into approved urban areas. Nearly all

Interstate 80N borders the John Day Dam site and pool along the south side of the Columbia River.



highways on the state highway system are also on the federal-aid system. With few exceptions, primary state highways are also primary federal-aid highways and secondary state highways are also secondary federal-aid highways.

Interstate Highways—The national system of interstate and defense highways is composed of 41,000 miles of the more important trunk highways in the nation. In Oregon there are 734 miles on this system which are largely portions of the state's primary network. The table below shows in detail the routes that make up the system.

Interstate Route No.	*Route Name*	*Miles*
5	Pacific Highway	308
80N	Upper Columbia River and Old Oregon Trail Highways	375
82	Umatilla-Stanfield	15
105	Eugene Spur	4
205	East Portland Freeway	25
305	Salem Spur	3
405	Stadium Freeway (Portland)	4
		734

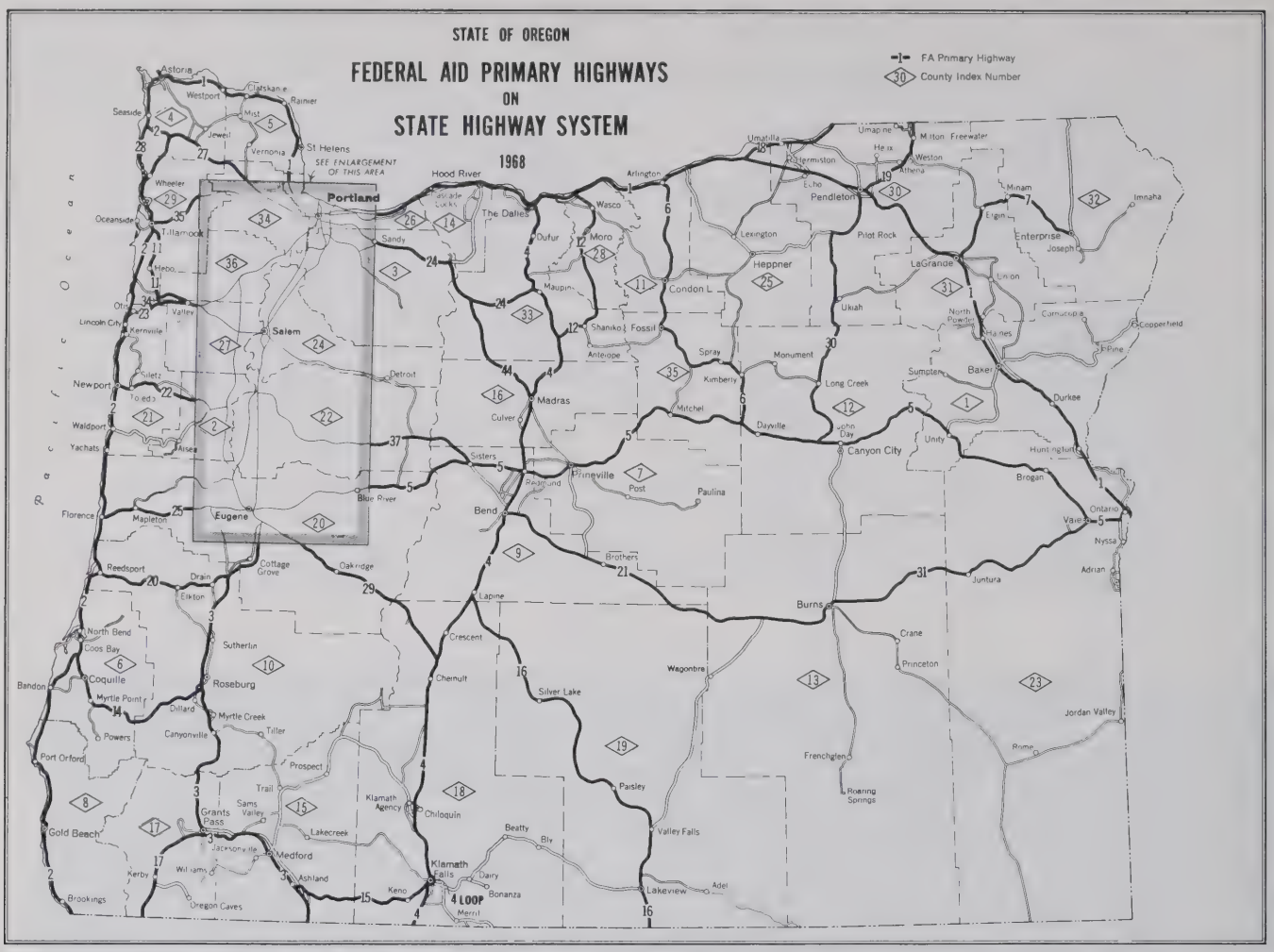
STATE OF OREGON

FEDERAL AID PRIMARY HIGHWAYS ON STATE HIGHWAY SYSTEM

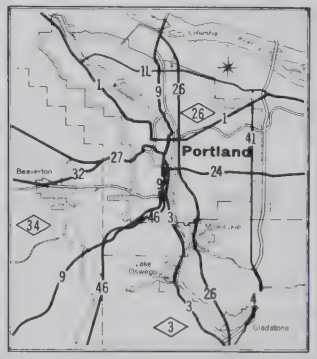
1968

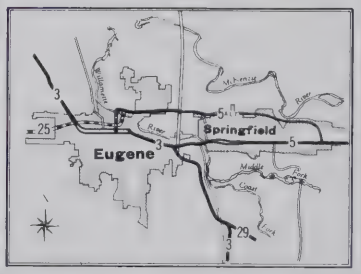
FA Primary Highway

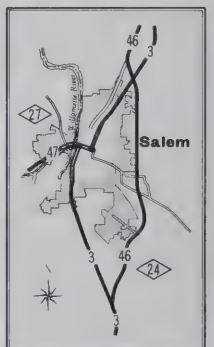
30 County Index Number



ENLARGED MAPS OF THE WILLAMETTE VALLEY AND METROPOLITAN AREAS







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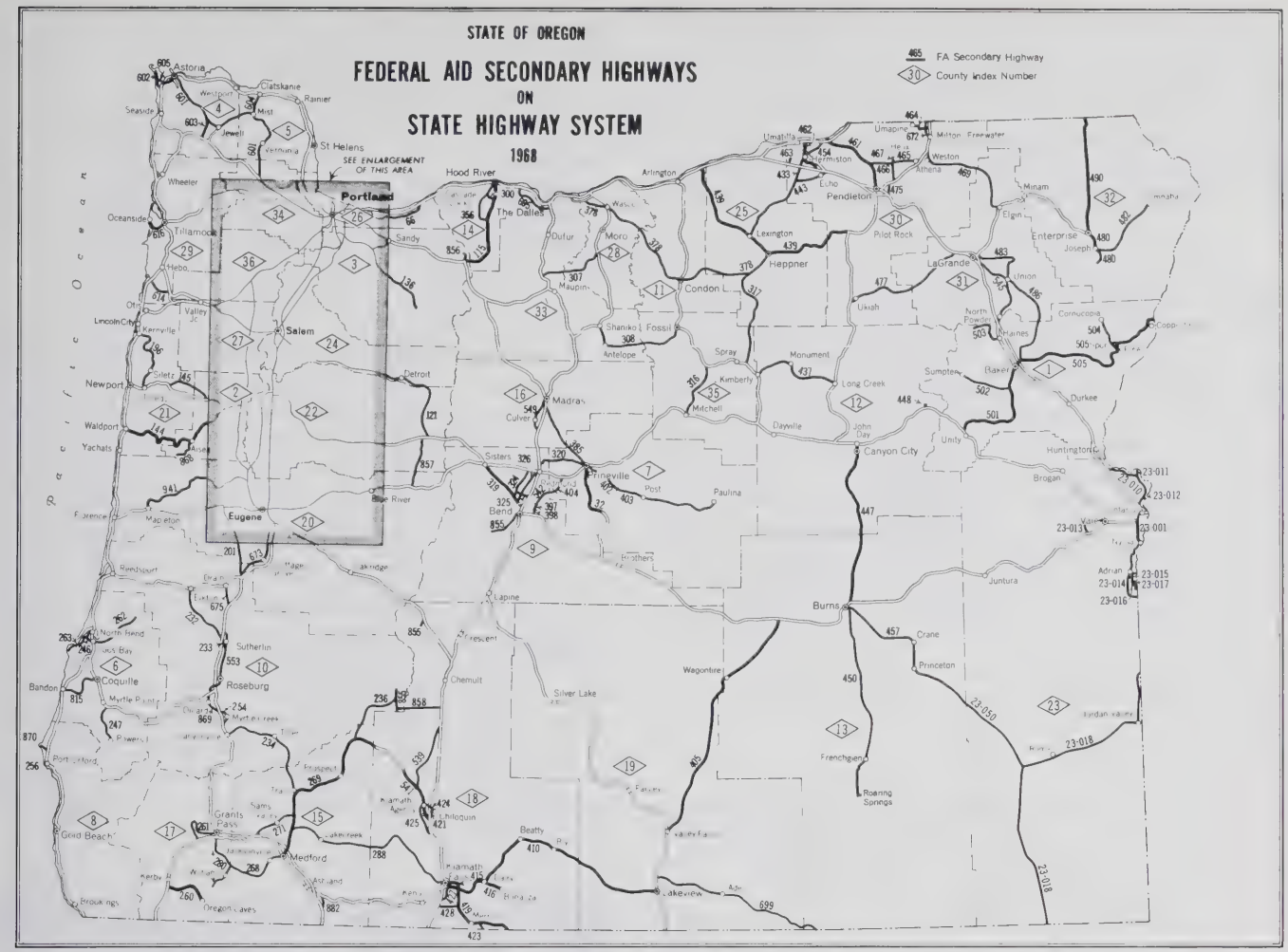
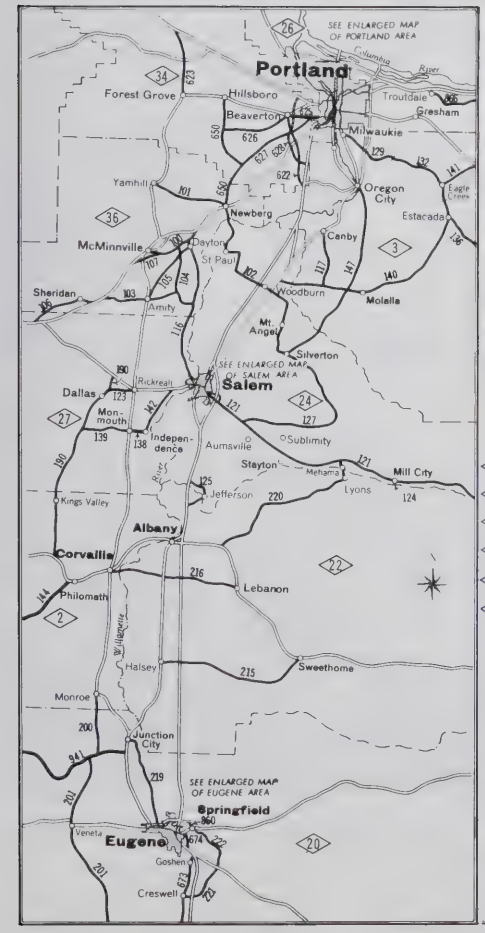
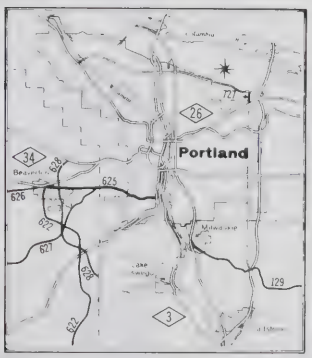
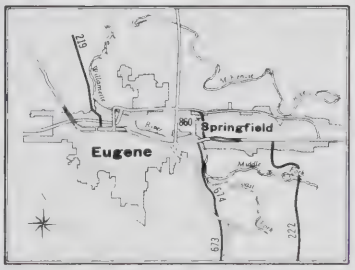
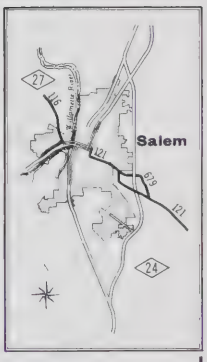






ENLARGED MAPS OF THE WILLAMETTE VALLEY AND METROPOLITAN AREAS





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Interstate highways are constructed as freeways and the construction costs are shared nominally on the basis of 90% by the federal government and 10% by the state. Because of the large areas of public domain in Oregon, an advantage in matching ratio is enjoyed by the state, which at present is 92.2% federal and 7.8% state. It has been estimated that the nationwide cost of this system will be over 56.5 billion dollars.

Federal-Aid Primary Highways—This group of highways comprises those main routes in the state other than the interstate highways. It is intended that the system make up a network connecting county seats and other population centers. Highways on this system are usually not constructed as freeways but they are in most cases throughways and are on the right of way that is generally at least partially access controlled. Normally the cost of construction of highways in this class is shared 50% by the federal government and 50% by the state. Because of the public domain area in Oregon, the ratio in this state at present is 63.5% federal and 36.5% state. Mileage of federal-aid primary highways is limited to 8% of the total mileage of public roads in existence in 1921. This places the limit in Oregon at 3,346 miles, which is exclusive of mileage within national forests, federal reservations and approved urban areas. In the system as now approved there are 3,030 miles.

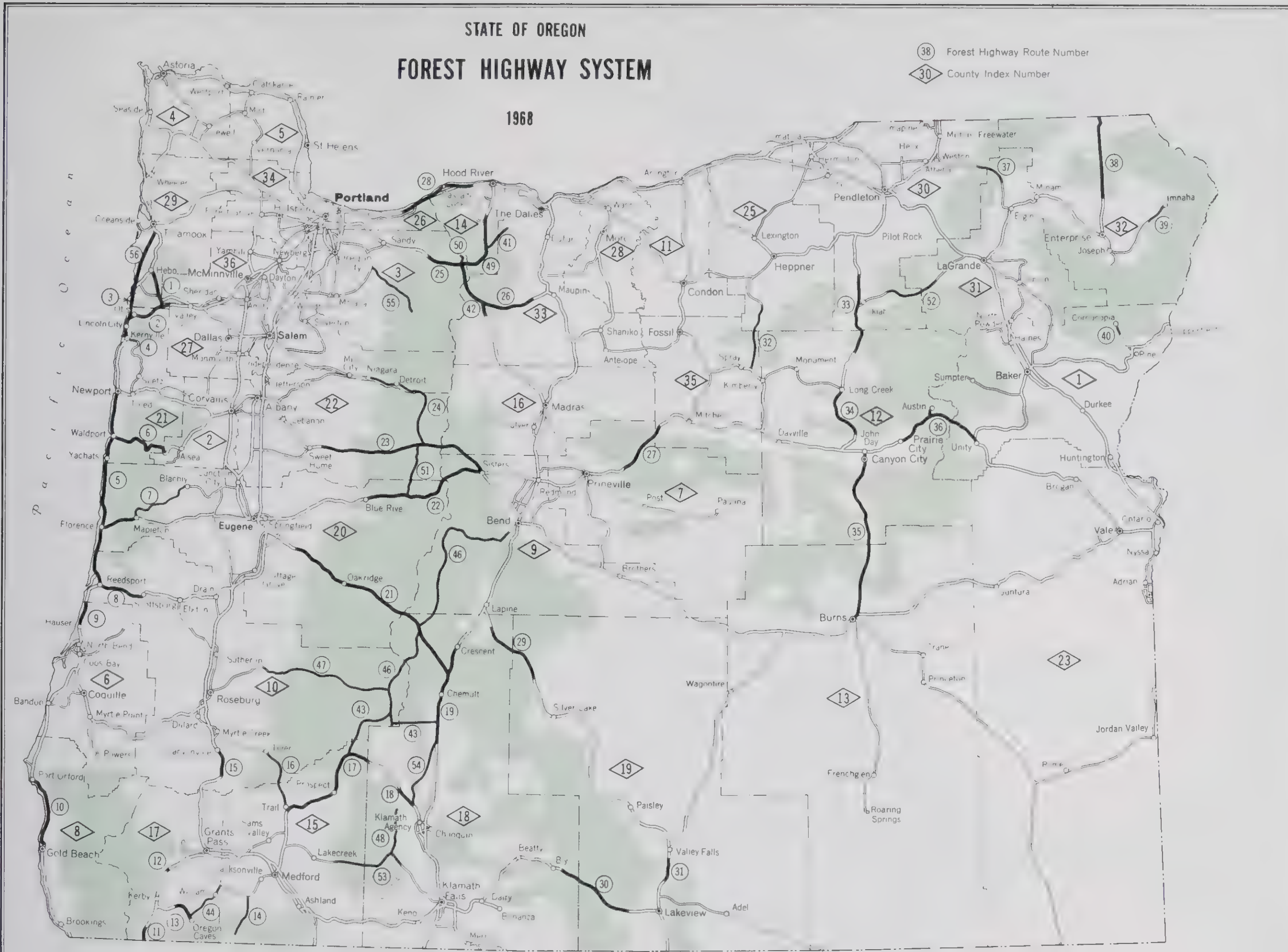
Federal-Aid Secondary Highways—This class of highways is intended to be the principal farm-to-market roads, mail delivery routes, public school bus routes, and highways and roads carrying traffic having high local use characteristics. There is no limitation on the mileage that may be included in this system except that it should not be greater than that which can be improved within a reasonable time. Designation of highways for this classification is made by the Highway Commission and local county officials with the approval of the Bureau of Public Roads. The secondary federal-aid system is unique in that part of it is composed of state highways (the majority being state secondary highways) and part is composed of county roads. Federal regulations require that 50% of federal secondary money be expended on roads of local jurisdiction (county roads). The matching ratio on federal secondary funds is the same as for federal primary funds. By agreement with the Oregon counties, no county funds are expended on those federal-aid secondary highways that are on the state highway system. As to those federal-aid secondary highways that are on the county road system, federal money provides for approximately 60%, county money for 20% and state highway money for 20% of the construction costs. The Highway Department makes such surveys, designs and other preliminary engineering functions as are necessary at Highway Department expense, and the counties provide such right of way as may be necessary at county expense.

At present the federal-aid secondary system consists of 3,530 miles of state highways and 4,650 miles of county roads. With one or two exceptions, these highways are not throughways, freeways or expressways. Those highways on the state secondary system are often constructed on partially controlled access right of way.

Extensions of Federal-Aid Primary and Secondary Highways in Urban Areas—A portion of the federal-aid apportionment to the various states is designated to be expended on those sections of federal-aid primary and secondary highways that extend into official urban areas. An urban area is any incorporated city or town of 5,000 population or more, and may also be any area adjacent to such city or town that has urban characteristics. An adjacent area to be eligible to receive federal-aid urban funds must first be approved by the Bureau of Public Roads. Urban funds cannot be expended outside of approved urban areas. Primary and secondary funds may be expended on their respective system without regard to urban limits.

Federal Lands Highways—Federal lands highways are highways or portions of highways which because of their being on public domain, Indian reservations, or other federal reservations, are eligible to have public lands highway funds expended on them. There is no definite system of public lands highways nor is any annual allocation made to Oregon of these funds. Congress provided $7,000,000 for fiscal year 1967 and $14,000,000 for fiscal year 1968, which is apportioned on a basis of need. Oregon received $400,000 from 1967 fiscal year funds and $400,000 from 1968 fiscal year funds. Construction work financed by these funds is contracted and supervised by the State Highway Commission. The federal government pays 100% of the contract costs, up to the limitation of the apportionment, on those portions of the project within public lands boundaries. So far public lands highway funds have all been expended on either primary or secondary highways. While some of the roads are throughways, none are freeways or expressways.

Cedar Hills Boulevard Interchange on the Sunset Highway in Washington County.



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Federal Forest Highways—This system of roadways is composed of such main highways within or near national forests as have been designated by the Federal Forest Service, the Bureau of Public Roads and the State Highway Commission for improvement with federal forest highway funds. Construction work financed with these funds is contracted and supervised by the Bureau of Public Roads, with the state having a voice in the selection of projects, matters of location and standards of construction. For the past few years, Oregon has received approximately $4,500,000 per year of these funds. As portions of the forest highway system may be coincident with interstate, primary or secondary highways, they are constructed to the standard of the particular system of which they are a part.

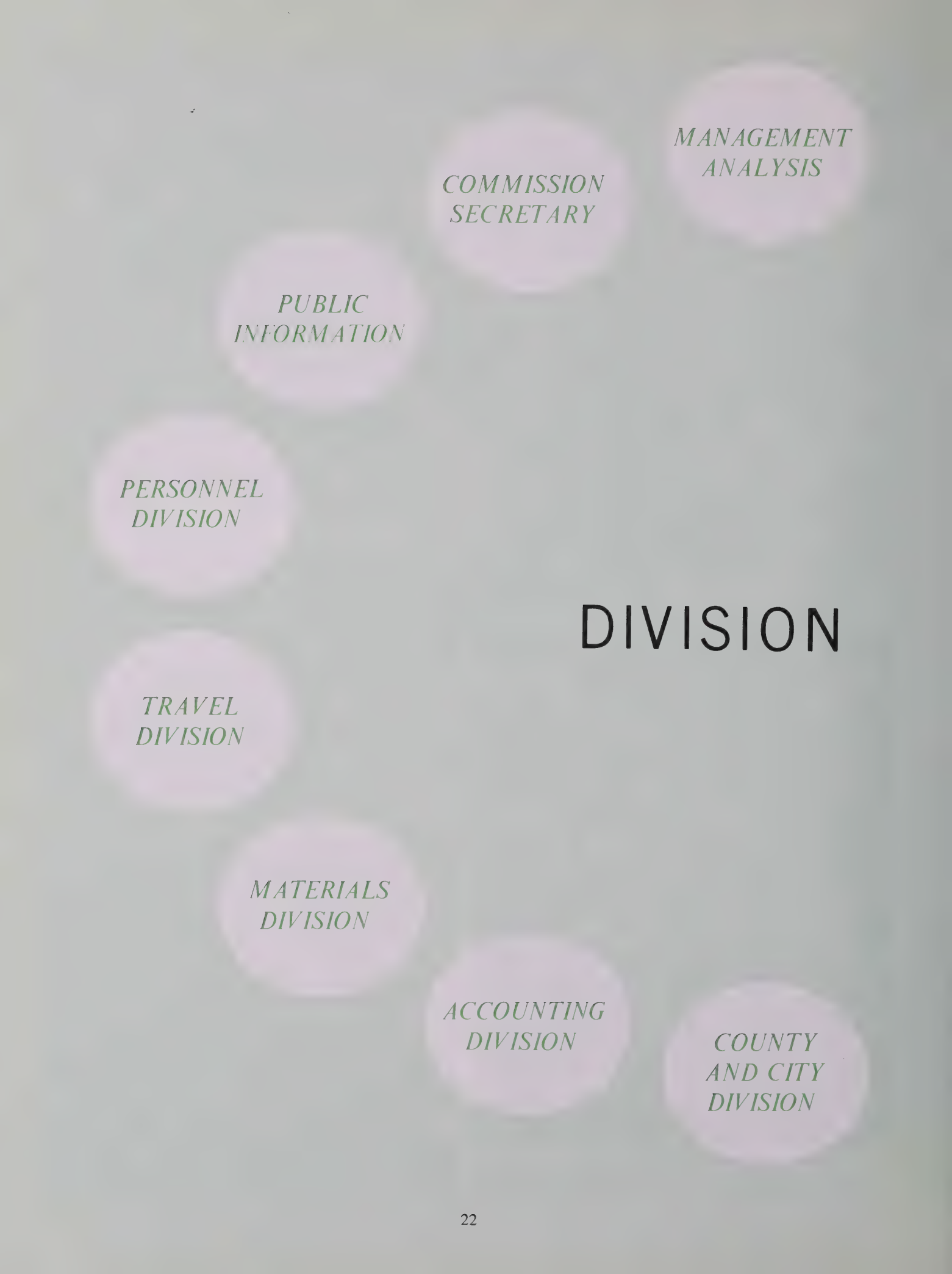
Federal-Aid for Highway Beautification

The Highway Beautification Act of 1965 was established to provide (1) control of outdoor advertising along interstate and primary highways, (2) control of junkyards along interstate and primary highways, and (3) landscaping and scenic enhancement on the federal-aid system.

Funds for control of advertising and junkyards are provided 75% by the federal government and 25% by the state. If control of advertising and junkyards in accordance with the law is not carried out, the federal law provides for a 10% penalty of regular federal-aid highway funds. During this biennium, Oregon laws were amended to provide the authority and means to fulfill the requirements for control of junkyards; further legislation will be required in Oregon to meet the standards set forth in the federal act for control of advertising.

Funds for landscaping, scenic enhancement and roadside development, including acquisition of strips of land adjacent to rights of way of federal-aid highways, require no matching on the part of the state.

The last appropriation of funds for this program was for fiscal year 1967. From that appropriation, Oregon received $93,888 for control of advertising, $160,572 for junkyard control, and $1,144,550 for landscaping and scenic enhancement.


MANAGEMENT ANALYSIS
COMMISSION SECRETARY
PUBLIC INFORMATION
PERSONNEL DIVISION
DIVISION
TRAVEL DIVISION
MATERIALS DIVISION
ACCOUNTING DIVISION
COUNTY AND CITY DIVISION

REPORTS

LEGAL AND RIGHT OF WAY DIVISION

CONSTRUCTION DIVISION

BRIDGE DIVISION

MAINTENANCE DIVISION

STATE PARKS AND RECREATION DIVISION

OFFICE ENGINEERING DIVISION

TRAFFIC ENGINEERING DIVISION

PERMITS DIVISION

LEGAL AND RIGHT OF WAY DIVISION

The Legal and Right of Way Division, under the supervision of the Chief Counsel, consists of the staff of attorneys who provide the legal services for the Department, and the staff of engineers, appraisers, negotiators and allied personnel who provide the services necessary for the acquisition and management of real property required in connection with the operation of the Highway Department.

Under the combined Legal and Right of Way Division, real property in the total sum of $27,575,000 was acquired during the biennium, made up of 3,100 separate property transactions. The dollar values of land costs were considerably up from the 15 million of the previous biennium, as well as the number of transactions. This may be explained in that much of the right-of-way activity during the previous period was centered in the rural areas of low-valued land, whereas the present period saw more activity in the urban areas of higher-valued property.

RIGHT OF WAY SECTION

Under supervision of the Right of Way Engineer and his assistant, the Department operates a staff of highly trained and specialized personnel who provide the services needed in the acquisition of land necessary to carry out the responsibilities of the Department. Liaison agents are assigned to each highway project for consultation and liaison with engineering forces engaged in location surveys. This provides better understanding of the impact highway improvement has upon private properties and, wherever possible, reduces the effect thereof to the least possible injury to such property. Experienced appraisers are available to appraise every acquisition prior to negotiation. Agents trained in the field of negotiation are used in contacting each property owner to attempt to acquire the needed lands by negotiation and purchase. The Property Management Section is organized to manage the property acquired, until it is actually put to use. This section also disposes of all excess properties not needed for Highway purposes. Agents who are skilled in providing relocation assistance to displaced persons are included on the staff.

Personnel experienced in each of the aforementioned skills are assigned to the several Department division offices where, under a Right of Way Supervisor, the property acquisition service functions on a decentralized basis.

The actual purchase of property proceeds under a *Manual of Policies and Procedures* which requires an appraisal of each property to be made prior to commencement of negotiations to determine the fair market value and damages or benefits, if any, to the remainder. Direct personal contact is made with the owner of each property, whenever possible, to negotiate with him as to compensation to be paid. A written option agreement is given to each owner which contains the terms and conditions of the purchase, as well as the state's determination of compensation to be paid for each property. A pamphlet is furnished each owner, explaining the process of right-of-way acquisition, and the rights extended in each instance as to relocation assistance, reimbursement for moving expense, and what may be expected in the way of eminent domain procedure in the event the owner and the state cannot agree as to compensation.

If an agreement cannot be reached with the owner as to compensation to be paid for his property, the Right of Way Section is required to prepare a recommendation of condemnation and to submit it to the Legal Section for further handling. The Commission, by resolution, declares the necessity of taking the property for a public use and authorizes the Chief Counsel to file appropriate legal proceedings. These proceedings are filed in the Circuit Court for the county where the property is located. Service of summons is made upon all parties having an interest in the land, and the matter progresses as in other such legal proceedings. If immediate possession is to be taken by the state for a public purpose, a deposit is made into court for the use and benefit of the property owners. Should the case be tried and the owner receive a verdict in excess of the state's offer prior to filing of the complaint, reasonable attorney's fees are assessed by the court to reimburse the attorney representing the owner.

The above procedures have resulted over the years in acquisition of a substantial number of needed properties by negotiation. During the past biennium it became necessary to file condemnation complaints in 520 cases. Although it is impossible to correlate the exact number of condemnations to the total acquisition during a biennial period, this amounts to approximately 16 percent. Of those which are filed, many are settled without resort to an actual trial. For the biennium, the Legal Section tried 192 condemnation cases and settled 272 cases.

The following table indicates the number of condemnation cases tried to acquire property for highway and park purposes and the monies involved:

Number of condemnation cases tried	192
Amounts of offer	$2,850,000
Demands of owner	5,600,000
Verdicts of jury	3,665,000
Attorneys' fees allowed by court to owner	258,000

It is interesting to note that the above results in condemnation compare favorably with the average of all other states. The U.S. Bureau of Public Roads, in 1965, issued a *National Summary of Statistical Land Acquisition Data* furnished by state highway departments. The data released indicates that the percentage of increase of verdict over the states' offer was 35 percent. In Oregon, this percentage of increase is approximately 28 percent.

Considering the total appraised value of all properties acquired with the total price paid (negotiated purchases, settlements and jury verdicts in condemnation), we find that all properties acquired during the biennium were obtained at a cost which exceeded appraisal by only 4 percent.

The above-mentioned statistical data of all the states reported by the Bureau of Public Roads indicates that the total cost of properties acquired by purchase and condemnation was also 4 percent in excess of the state's appraised value. Note should also be taken of the increase in attorney fees allowed: 1960-62, $95,040; 1962-64, $196,709; 1964-66, $237,644; as compared to $257,960 for the present biennium.

American Appraisal Institute Courses I and II were offered at Portland State College during the biennium. A number of right-of-way agents and staff attorneys attended the two-week courses. The Department tries to have agents who are utilized in the appraisal process attend these courses when they are taught in Oregon.

A continuing education program for right-of-way agents

has been underway. The technique of negotiation and appraisal are the basic needs and requirements of agents, and these subjects receive the highest concentration of teaching effort. Senior agents are used for instruction whenever possible.

An attempt is made to accomplish as much of the appraisal work with staff personnel as is feasible. Fee appraisers are employed where excessive workload dictates that such be done especially if it is not economical or justifiable to enlarge the staff to handle projects which are needed on short notice. Fee appraisers are also employed for the unusual property which requires an appraisal by a specialist and in case of condemnation action where a supporting witness for the staff appraiser is needed. A list of persons employed and amount paid during the period, in accordance with ORS 293.635, is included as a part of this biennial report.

The Property Manager, who is charged with handling the disposition of improvements prior to contracting, has held public sales for removal of such improvements. The total amount returned to the Highway Fund as a result of such sales was approximately $855,000. Lands which are not immediately needed for construction projects are rented by the Property Manager. Rental income during the biennium was approximately $345,000.

As a part of the acquisition program, relocation advisory assistance is offered to all grantors. In the case of an owner being displaced from his home or business, moving costs for personal property or business inventory are paid. The paying of relocation costs was first started in April of 1963 as a result of legislative action. Since that date, over one-half million dollars in moving costs have been paid. Between July 1, 1966 and December 31, 1967, there were 641 residential moves for which reimbursement was made in the sum of $66,842. During the same period reimbursement in the amount of $53,261 was made for 116 businesses moved.

In order to standardize the appraisal product, a revised appraisal form has been developed. All appraisals, both staff and fee, are reported on the form rather than the previously used narrative type. A form-type appraisal is much easier to review, and the information included is readily found with a minimum of effort.

The *Right of Way Manual* which describes the right-of-way acquisition process, was revised and reprinted during the biennium. The *Appraisal Manual* was likewise revised and reprinted.

A program of land economics studies, wherein an investigation is made of the after sales of severed remainders, has continued during the biennium and the results of the study are reported to the BPR National Data Bank.

The Right of Way Section has also investigated the use of cattle passes on the highway system, and a report will be prepared in the near future. It would appear from an examination of the data collected that a high percentage of cattle passes on the highway system are not being used. Changes in land use are responsible for nonuse in most cases.

A liaison program between the field right-of-way forces and the field locating engineers is continuing. In order to insure that all land service facilities are constructed only where there is a clear economic need, all real property valuation data is supplied to the locating engineer by a liaison agent during the time of the field location survey. The engineer analyzes the data collected, and construction of land service facilities are recommended only where the estimated cost of such construction is less than the damage to property. In the event there is no economic justification to construct a land service facility but a property is actually damaged, then a damage payment to a grantor is made. By investigating land service justifications early, such as at the highway location stage, considerable time is saved during the later acquisition stage.

Safety rest areas on the Pacific Highway (Interstate 5) at the Santiam River.

LEGAL SECTION

The Chief Counsel and a staff of thirteen attorneys, all of whom are also Assistant Attorneys General, provide essentially all of the legal services for the Commission and Departmental staff. These services range from day-to-day consultation with and rendering advice to various members of the staff to the representation of any or all of the aforementioned parties in any of the several state courts and the various courts in the Federal Judicial System.

The Legal Section performs many duties in addition to prosecuting condemnation actions, including defending the Commission and Department officials in all actions brought in the nature of inverse condemnation, contractors' claims and torts of employees while acting within the scope of their employment, recovering for damages to state's property, injunction suits, and in virtually all fields of law.

The Department makes a determined effort to recover damages to highway and park facilities caused by negligent or willful destruction by the public. Many of these are small but, when considered in the total, represent a considerable waste of public funds in repair costs. These claims are handled by the Legal Section. Some require institution of legal proceedings. During the biennium, to March 1, 1968, 921 claims were

made. Of these, 634 were collected in full, 18 were collected in part, through compromise settlements, and 172 are being collected by installment payments. Some claims are found to be uncollectible after initiation of the claim. As a result, 97 initiated claims were abandoned. Total collections amount to $193,300.

The Legal Section also makes appearances before various administrative agencies, the most frequent being the Public Utilities Commission. Here all matters involving railroad and highway crossings and encroachments are determined. Research, opinions and legislation are also of major import.

Unemployment Compensation hearings	4
Civil Service Commission hearings	1
Construction contracts reviewed	252
Miscellaneous agreements examined and reviewed	285
Agreements prepared (not including options, deeds, etc.)	93
Indentures and grants of access prepared	103
Condemnation resolutions prepared	946
Miscellaneous resolutions prepared	8
Opinions prepared	95
Decisions and notices to utilities concerning moving the same	263

South Tigard Interchange at the intersection of Pacific Highway (Interstate 5) and the Beaverton-Tigard Highway in Clackamas County.

The following table indicates the court activity of the legal staff:

Court	*Pending July, 1966*	*Commenced*	*Cases Tried*	*Cases Settled*	*Pending 12-31-67*
United States Court of Claims	*0*	*1*	*0*	*0*	*1*
District Court of United States for District of Oregon	*3*	*10*	*2*	*2*	*9*
State Supreme Court	*5*	*6*	*6*	*4*	*1*
Circuit Courts of State of Oregon	*193*	*447*	*160*	*225*	*255*
District Courts of State of Oregon	*3*	*144*	*75*	*39*	*33*
Justice Courts of State of Oregon	*0*	*2*	*2*	*0*	*0*
TOTALS	*204*	*610*	*245*	*270*	*299*

The following table indicates the legal staff's activities in the above matters as projected to June 30, 1968:

Condemnation cases tried	192
Condemnation cases settled	272
Contractor's claims (construction contracts) tried	4
Contractor's claims (construction contracts) filed and settled	9
Cases appealed during period (state is respondent or appellant)	7
Miscellaneous cases tried	20
Public Utility Commissioner proceedings, petitions, answers	73
Damage claim cases filed	149
Damage claim cases taken to judgment or settled	130

Legal counsel is furnished to the Scenic Area Board in connection with its activities in declaring scenic areas along state highways. Counsel has also been furnished to assist the Willamette River Park System Committee established under Chapter 551, Oregon Laws 1967.

Since the passage of Chapter 601, Oregon Laws 1967, (beach bill), the Legal Section has been called upon by the Department to represent the state in litigation involving the interpretation and enforcement of the bill.

Providing title information for, reviewing and preparation of the necessary legal opinions on each purchase of real property is a vital service performed by the legal staff. Drafting instruments for and guiding the closing of transactions is also a function of the legal staff. An attorney is designated to work full time in carrying out this responsibility.

SPECIAL SERVICES COMPENSATION

Statement published in accordance with the requirements of ORS 291.570, showing payments for special services by the State Highway Department during the period July 1, 1966 to December 31, 1967.

REAL ESTATE FEE APPRAISERS:	*Amount*
Ambrose, Givens & Profitt, Portland	
Ambrose, N. A.	$21,650.00
Givens, R. C.	3,975.00
Profitt, R. O.	18,400.00
Boise, E. B., Salem	1,600.00
Brunton, Gordon, Realty, Eugene	
Brunton, G.	2,700.00
Buettner, C. M., Portland	8,675.00
Brewster, Burnett & Scholz, Portland	
Burnett, A. A.	1,383.70
Chilcote & Smith, Klamath Falls	
Chilcote, R. E.	6,650.00
Cougill & Hansen, Eugene	
Cougill, J. G.	3,225.00
Hansen, H. I.	3,475.00
Eugene Realty Co., Eugene	
Brown, Mack	9,600.00
Evans, Ken, Portland	18,975.00
Farley, Lloyd, & Assoc., Bend	
Farley, L. M.	425.00
Felthouse, W. W., Walla Walla, Washington	60.00
Frank, R. J., Realty, Portland	
Frank, R. J.	225.00
Fromme, David, Co., Medford	
Fromme, David C.	600.00
Geiser, P. H., Salem	5,187.50
Gilbert, G. A., Pendleton	8,976.75
Kolberg, Elmer, & Assoc., Portland	
Gainer, M. O.	40,584.16
Kolberg, E. F.	25,927.50
Lewis, J. C., Bend	17,024.51
Marineau, F. J., Coquille	13,687.50
Mellor, Ross, Prosser, Wash.	10,225.00
Meyer, H. F., Forest Grove	8,705.00
Miller, J. E., Bellingham, Wash.	2,000.00
Mitchell, Sykes, West Linn	18,600.00
Newell, R. S., Portland	325.00
Overmire, G. R., Astoria	300.00
Pacific Realty Co., Eugene	
Harris, E. L.	5,325.00
Paget, A. A., Lake Oswego	900.00
Parker, J. M., Salem	6,315.00
Parks, Del, Portland	8,075.00
Pattee, J. W., Portland	23,255.66
Property Counselors, Inc., Portland	
Walstrom, R.	2,000.00
Real Estate Research Corp., San Francisco, Calif.	22,575.00
Rodman, Urey & Holt	
Holt, L. A.	3,850.00
Rodman, J. A.	29,875.75
Rodwick, A. J., Portland	31,515.75
Sackos, M., Baker	8,775.00
Scharn, W. H., Pendleton	30,698.00
Scheidt, John, Eugene	3,000.00
Thomas, Bill, La Grande	13,561.65
Trowbridge & Assoc., Portland	
Trowbridge, C. R.	16,033.00
Turner, Ken, Portland	700.00
Vandagrift, Cap, Medford	25,040.00
Wacker, H. R., Portland	5,150.00
Whittier, Gene, Grants Pass	4,537.50
Woodward, Draper & Stepp, Portland	
Draper, L. D.	17,238.75
Stepp, H. W.	1,850.00

SPECIAL APPRAISALS:	*Amount*
Aerolite Neon, Eugene	$ 25.00
Anderson, H. F., Banks, Idaho	1,815.53
Bishofberger, J. A., Portland	824.70
Bigley & Feiss, Eugene	873.65
Brosterhaus Const. Co., Klamath Falls	50.00
C & K Petroleum Equip. Co., Eugene	562.40
Camplan Const. Co., Portland	594.38
Christensen Const. Co., Eugene	75.00
Clark & Groff Eng., Inc., Salem	3,634.00
De Haan, Thijs, Hillsboro	100.00
Dyball, Gerald, Salem	318.89
E & H Const. Co., Pendleton	240.00
Eastern Oregon Neon Sign Co., Pendleton,	44.00
General Appraisal Co., Portland	7,075.00
Green, Carl E. & Assoc., Portland	3,975.00
Greenwood, Harold, Masonry, Inc., Klamath Falls	20.00
Haner, Ross & Sporseen, Portland	3,200.00
Hardie, Walo & Son, Eugene	52.95
Harsin, Wayne, Heppner	92.50
Holman, Ken, Bend	79.80
Honald, Inc., The Dalles	202.50
Johnson, D. E., Milwaukie	50.00
Jolma, L. N., Co., Portland	4,745.30
John Day Valley Plumbing and Heating, John Day	50.00
Kelley & Assoc. Eng., Portland	2,970.00
Kruchek, Keith, Consult, Eng., Portland	262.50
Lantz, C. A., Const. Co., Salem	240.00
Letsch, A. L., Klamath Falls	50.00
Martin Bros., Inc., Salem	193.50
Mason, Dean, Bldr., Klamath Falls	25.00
Mason, Henry M., Co., Portland	200.00
McKoskey, Tom, Rainier	16.50
Miles, Thomas R., Portland	1,027.48
Northwest Hotel Supply, Portland	3,900.00
Petroleum Services Co., Pendleton	54.00
Portland Sign & Neon, Portland	644.00
Prow Industrial Mach., Grants Pass	48.00
Reed & Cross, Eugene	15.00
Seven Dees Nursery, Portland	75.00
Star Lite Neon Sign Co., Albany	12.00
Thomas, Gail M., Bend	1,050.00
URECA, Inc., Portland	650.00
U. S. Appraisal Co., Portland	1,775.00
Valley Pump & Equip., Klamath Falls	24.00
Wagoner, R. H. & Co., Salem	1,032.72
West Coast Sanitation, Portland	322.50
Wuonola, Arvid, Astoria	35.00

SPECIAL SERVICES:	
Brittsan, E. C., Central Point	100.00
Farrar, B. L., Baker	100.00
Oberbillig, E., Boise, Idaho	993.90
Strasser, R. J., Portland	100.00
Taylor, R. R., Silverton	545.00
Towne, Robin M. & Assoc., Seattle, Wash.	347.10
Universal Appraisal & Realty, Portland	675.00

Guard rail installation under contract along the Columbia River Highway (Interstate 80N).

CONSTRUCTION DIVISION

The Construction Division is charged with the planning, location, preliminary design, and supervision of all highway construction within the state, with the exception of detailed design and construction of bridges. This division is administered by the Construction Engineer, with the aid of three assistants.

The Construction Division is further subdivided into the sections listed below. Each section is headed by a staff assistant who is responsible to the Construction Engineer and his assistants for the operation of their phase of the work.

CONSTRUCTION OFFICE SECTION

The Office Section performs the many tasks necessary for efficient operation of the Construction Division. This includes supervising the secretarial pool; handling, co-ordinating and filing a large volume of correspondence and related matters; and maintaining Construction Division records relative to personnel, property control and project status. The *Quarterly Construction Status Report* for the Highway Commission is prepared and distributed by this section.

CONSTRUCTION PLANNING SECTION

The Planning Section carries on a continuing needs study which reflects the cost of improvements necessary to bring the highway system of the State of Oregon to a condition adequate for present-day traffic. Methods of inventorying the existing facilities have been standardized so that a uniform method is applied to every mile of road in the system. The information collected by field teams is card punched and processed through data processors and is re-examined and updated continually.

This section also performs special studies of statistical and needs nature; maintains liaison with the Coast and Geodetic Survey with respect to grid control and bench level networks; and assembles information for updating the Construction Division *Manual of Instructions.*

PRELIMINARY STUDIES SECTION

The Preliminary Studies Section is responsible for the study of reconnaissance lines and the preparation of reconnaissance reports, analyses, estimates, maps, and profiles. The assembly, investigation and study of hydrological data for use in determining locations, sizes and types of drainage facilities is a function of this section. Assignments also include reviewing various engineering and technical publications for the purpose of recommending changes in current location and construction practices.

LOCATION SECTION

The Location Section, under the direction of the Chief Locating Engineer, is responsible for initiating, supervising and completing highway locations in all rural areas of the state. Upon preparation of final contracting plans by the Office Engineering Division, it is the duty of the Location Section to conduct jointly with a Bureau of Public Roads Area Engineer a "plans in hand" inspection of projects prior to advertising for bids.

The Chief Locating Engineer also supervises the work of

three subsections: the Programming Unit, the Photogrammetry Unit, and the Rural Design Unit.

The Programming Unit is responsible for maintaining records necessary for all Commission construction programs. This unit processes all survey authorizations submitted by the division offices and prepares an accompanying prospectus. Sufficient files and records are kept to advise the administration on the progress of any survey or project underway.

The Photogrammetry Unit prepares maps and mosaics from aerial photography for highway planning, location and design. Currently this section is mapping the Oregon beaches for the Parks Division, which is the largest single project performed by the Photogrammetry Unit. As of January 1, 1968, 360 miles of the coast have been photographed and the fieldwork completed. Aerial mapping is complete from Astoria to Newport (approximately 135 miles), with contoured mosaics completed from Astoria to Tillamook Bay. All of the mapping is scheduled for completion by June 1, 1968. A new four-projector stereoplotter and new aerial photographic enlarger, delivered in September 1967, will be instrumental in the early completion date scheduled for this project.

The Rural Design Unit is responsible for final examination of rural location plans, checking specifically the slopes, adequacy of right of way, drainage, surfacing depths, design and geological stability. In addition, this unit prepared many plans and estimates on a projected basis for future construction projects.

URBAN DESIGN SECTION

The Urban Design Section is responsible for route selection, design, preparation of final layout plans in all urban areas, and for design of interchanges and traffic channelization in rural areas. These duties include study of existing origin-destination surveys as supplied by the Traffic Division, the study of congestion in the area to be served, the operation and design of facilities to eliminate such congestion, the preparation of reports, and the assembly of data for hearings necessary to implement these plans. Preliminary plans for route selection through urban areas are prepared from photogrammetric maps compiled from aerial photographs. Generally, no fieldwork is necessary until the final layout plan has been selected, public hearings held, and agreements reached with the local government involved.

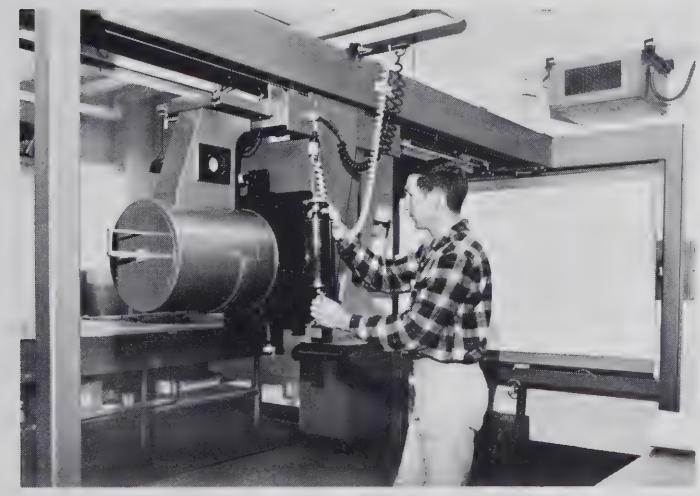
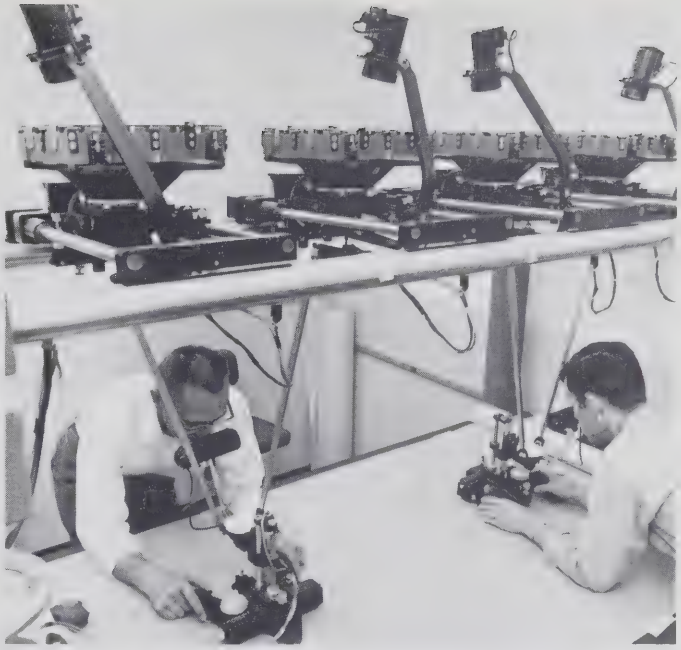


Photo-enlarging equipment in the Blueprint Section is used to enlarge aerial photographs for use by the Photogrammetry Section.



Equipment used by the Photogrammetry Section to prepare maps and mosaics from aerial photographs. The maps are used to plan highway location and design.

LANDSCAPE SECTION

The Landscape Section is responsible for the design and technical inspection of all plantings on highway right of way; landscaping around Highway Department buildings; the planning and supervision of roadside rest areas; the placement of historic markers; and the undertaking of studies to achieve maximum attractiveness by landscaping the various areas of the highway system.

Special studies are conducted on use of functional plantings for screening and erosion control. Studies are also made of planting methods used under difficult growing conditions.

The Landscape Section furnishes technical inspection on contracts for landscaping projects, including the quality of plants, their placement, the preparation of the ground, and the planting operation. The technical assistance of an agronomist is available to determine the location and scope of necessary erosion control work.

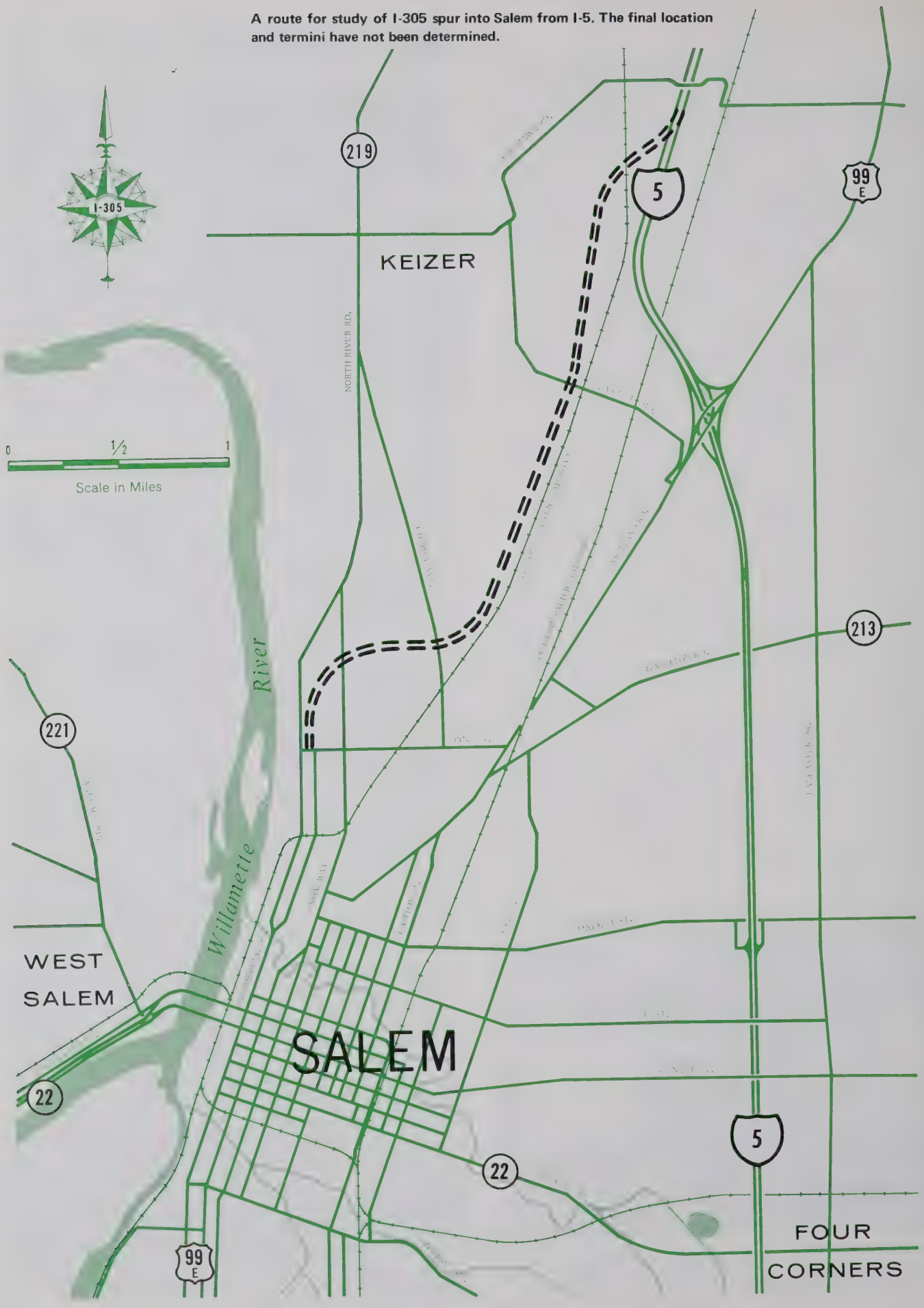
Enactment of the Federal Highway Beautification Act of 1965 greatly increased the activities of the Landscape Section. In order to meet the requirements of this act, a state survey is currently underway covering a ten-year program for the acquisition and development of scenic strips, including construction of rest areas and the proposed roadside development of highways on the federal-aid system.

UTILITIES LIAISON SECTION

The Utilities Liaison Section is responsible for necessary liaison work to secure removal and adjustment of public and private utility facilities which conflict with highway construction. This section is also responsible for negotiations with railroads affected by construction projects and for initiating applications to the Public Utility Commissioner for grade crossings required by highway construction.

Many of today's sophisticated utility services, such as telephone coaxial cables, long line petroleum product transmission

A route for study of I-305 spur into Salem from I-5. The final location and termini have not been determined.



pipes, natural gas transmission pipes, and electric power transmission lines, cannot be readily adjusted. In some instances, special equipment or special materials are required which can be secured only by special order. It is the responsibility of this section to arrange for the adjustment of such facilities as required by highway construction.

Fieldmen are assigned to headquarters in Portland, Salem, Roseburg, and La Grande to assist in carrying out the duties of this section. In order to relocate the utilities as expeditiously as possible, close contact with utility companies is maintained by the fieldmen from the beginning of the location survey through the design and final construction of a highway project.

RIGHT OF WAY DESCRIPTION SECTION

The Right of Way Description Section is responsible for the preparation of all legal descriptions involving acquisitions for highway right of way, stockpile sites, material sources and state parks. This section also prepares right-of-way maps and other maps which are a permanent record of various surveys. These maps also indicate the data pertaining to each property acquisition; and, when complete and as required by law, a reproducible copy is submitted to the proper county official for filing in the records.

COST ANALYSIS SECTION

The Cost Analysis Section advises all segments of the Highway Department as to the probable cost of work to be undertaken. This section carries on a constant spot checking of contracts in progress to determine actual contractor cost of work being done. They also establish the estimate prices to be used in submitting plans, specifications and estimates to the Bureau of Public Roads prior to advertising for bids.

CONSTRUCTION TESTING SECTION

The Field Testing Unit supervises a state-wide training program in order to maintain a competent and adequately trained force of field inspection personnel. Formal training courses are provided each year for field engineers and their inspectors in "on the job" sampling and testing of materials and techniques for inspection of work performed in the fields of soils, surfacing, paving and other related highway work. Upon completion of any one of these training courses, personnel are examined and certified as to their proficiency in that particular field of inspection; 130 to 200 engineers and inspectors attend these schools and are certified in one or more fields of inspection each year.

A continuing liaison between the Construction Division and field engineering offices is maintained to co-ordinate and standardize field procedures, methods and controls pertaining to inspection, testing and documentation of materials incorporated into highway construction. To further aid the field engineers and their inspectors, an *Inspectors Manual* was prepared and published during the biennium.

This section works with the Central Laboratory and the Specifications Section of the Office Engineering Division in the review and development of project specifications. Upon completion of a highway construction project, the final "field job control" documentation for specification compliance is reviewed and recommendations made as to acceptance, rejection and/or penalties for nonconformance with specification requirements.

A Department drill crew installing perforated drain pipe to correct a potential slide area on the Siletz Highway.

SOILS SECTION

The Soils Section has the responsibility of advising design and construction groups on matters concerning soil conditions, stability, landslide control, proper cut and fill slope design, drainage and counterbalances. All surfacing depths and designs are established by this section. They also advise and assist in the prospecting of present and future rock and gravel sources and in the location of water wells for rest areas, parks and landscaping facilities.

During this biennium, the Soils and Geology Section has continued regular functions, including the following special studies:

1. The search for and evaluation of future sources of mineral aggregates for highway construction which had been carried on for several years using highway research project planning funds, was discontinued because of the limitation of available funds and because the work can be more effectively done in the preliminary engineering and design stages of projects.

2. A report entitled *Verification of Nuclear Moisture and Density Gauges* was published which summarized data and conclusions obtained over three years of testing with these instruments. The instruments are designed to enable field moisture and density tests in earth and pavement materials to be made more quickly and reliably than was possible in the past.

3. Evaluation of research reports and laboratory tests of hydrated lime for use as an admixture in clay subgrade soils was completed. Conclusions derived from these studies have led to the specification for application of hydrated lime to clay soil subgrades in recent pavement construction. This use of hydrated lime will strengthen the subgrade layer of the pavement structure as well as make the lower part of the crushed rock base layer more effective for carrying heavy traffic loads.

BRIDGE DIVISION

The Bridge Engineering Division is responsible for the design engineering on all highway bridges; grade separation structures; retaining walls; and office, equipment, park and maintenance buildings.

Within this division, the Design Section prepares the final contract plans prior to receiving bids for contract awards. Data is gathered in the field on soil and foundation conditions at the proposed structure site. With this information, along with other design features, a structure is so designed that it will carry the required load and add aesthetic value to the surrounding area.

Construction engineering for bridges and incidental structures is under the direct supervision of Division Engineers, using a staff of resident engineers and inspectors specially trained in the many problems of bridge construction.

Due to special problems encountered in bridge design, the Bridge Division gives technical assistance to counties and cities

State Highway 42 relocation east of Powers Junction in Coos County.

on design of bridges under their jurisdiction. This assistance may include conferences with local officials to discuss problems in bridge construction and the actual design, including final plans and specifications ready for receiving of bids. Field engineering, supervision and inspection services are available at cost to local government agencies on contracts awarded by them.

Major efforts of the Bridge Division were directed toward completing contract plans for the many structures involved in the freeway system in the Portland, Eugene and Pendleton areas.

During the biennium, a contract was awarded for work on the East Portland Freeway (Interstate 205) for the West Linn crossing of the Willamette River, a major structure on the route, and design work was completed for contracting the West Linn-Pacific Highway Section of the route which involves

Bridge construction near Eagle Creek on the Bonneville-Hood River County Line Section of the Columbia River Highway (Interstate 80N).

22 separate stream crossing or grade separation structures. These two contracts will complete construction on the route from its junction with the Pacific Highway (Interstate 5) easterly to the route junction with the Pacific Highway East on the east shore of the Willamette River in the vicinity of Oregon City. Planning continues on the many structures on the remainder of the route.

The initial contract for work on the Fremont Bridge over the Willamette River was awarded. This contract involves construction of four major piers for the main river crossing, with contracts for the main river span and the east and west approaches to follow in the succeeding biennium. Target date for completion of this structure is late in 1970. With completion of the Fremont Bridge, the Stadium Freeway (Interstate 405)—the so-called inner band of the project system of freeways— will be completed.

A major contract for the eastbound tunnel through Vista Ridge was completed, and another contract has been awarded for the westbound tunnel paralleling the previously constructed tunnel, with completion of the new work forecast for the early summer of 1970. When completed, the new tunnels will afford a direct connection for traffic on the Sunset Highway (Canyon Road) to the Stadium or inner band free-

way system in Portland.

Good progress is being made on the structures, grading, paving and signing on the Bonneville-Hood River County Line Section of the Columbia River Highway (Interstate 80N), with completion forecast for midsummer of 1969. This section, when completed, will bring the Columbia River Highway and the Old Oregon Trail (Interstate 80N) up to freeway standards from Portland to the east edge of Pendleton.

Good progress is also being made toward completion of the Willamette River Bridge Section of the Eugene-Springfield Highway (Interstate 105) in the Eugene area. Completion of the section, forecast for late 1968, will afford a direct four-lane connection from metropolitan Eugene in the vicinity of First Street to the Pacific Highway (Interstate 5) east of Eugene, leaving one section—essentially First Street to Seventh Street—to be finished to complete freeway work in the Eugene area.

Three major contracts for grading, paving, structures and other appurtenances were awarded to complete the Old Oregon Trail to freeway standards from Stanfield Junction to the east edge of Pendleton. These three contracts involve construction of 32 structures.

Arlington Viaduct on Interstate 80N. The City of Arlington, the highway, and the railroad were all relocated around the John Day Dam pool.

Construction of the largest and most expensive structure in the state, which crosses the Columbia River between Astoria, Oregon and Point Ellice, Washington, was completed and opened to traffic on July 29, 1966.

MAINTENANCE DIVISION

The Maintenance Division is responsible for keeping highways in a condition to preserve the life of highways and to provide for safe and unrestricted use by motorists at a reasonable cost to the public. In addition to general highway maintenance, the Maintenance Division administers the Permits, Equipment, Sign and Radio Sections; the operation of drawbridges and toll bridges; the maintenance of rest areas and the highway minor betterment program.

Several significant changes were noted and new programs initiated in maintenance during this biennium. The area experiencing the greatest increase in expenditures was snow removal and sanding of state highways. The cost of this work increased from less than one million dollars in 1957 to over three million dollars in 1967. This additional cost was largely due to an increase in traffic volume, higher speeds, and motorists who are less tolerant of delays. To offset rising expenditures, the Maintenance Division implemented a program of training off-season personnel (such as bridge crews, landscape crews, park employees, and survey crews) to operate plows and sanding trucks during snow storms. By doing this, it was possible to reduce the number of maintenance employees last year from 1,424 men to 1,352 men.

The higher standard of winter maintenance required an overall upgrading of snow-fighting equipment; e.g., large capacity sanding trucks, heavy 4-wheel-drive graders, large rotary snowblasts and heavier snowplow trucks. This overall upgrading of winter maintenance equipment was the first major change in this type of equipment since 1949, when considerable war surplus equipment was purchased and modified for winter maintenance.

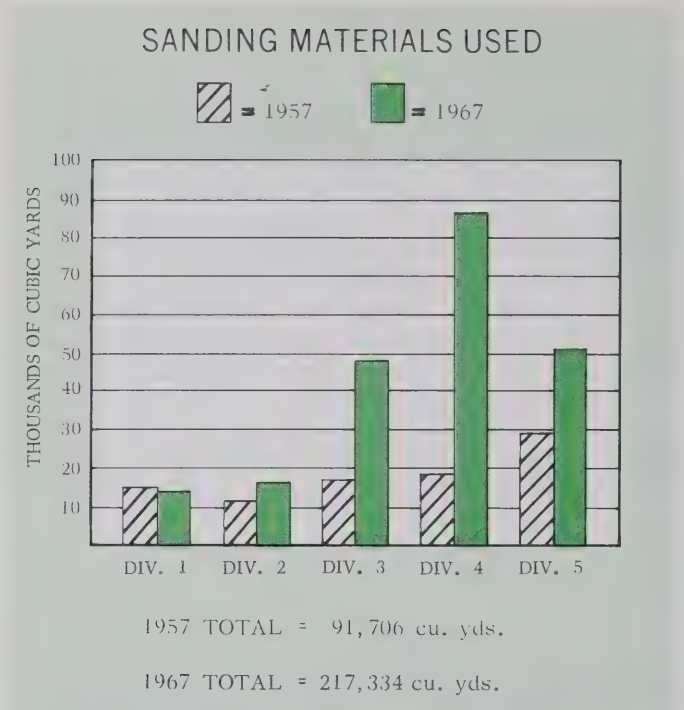
The table below shows the major equipment purchased during 1967-68:

WINTER EQUIPMENT PURCHASED

	1967	*1968*
Light Snow-Plow Trucks	85	90
Heavy Snow-Plow Trucks	23	6
Heavy Sanding Trucks, 10 cu. yd.	47	14
Loaders, 1-1/4 cu. yd.	0	30
Loaders, 3-1/2 cu. yd.	5	0
Snowblasts, Large Rotary	6	4
Medium Graders	0	18
Heavy Graders, 4-wheel drive	0	6

New building construction associated with winter maintenance included construction of a modern maintenance station near Parkdale and new sand sheds at Santiam Pass, Bennett Pass, Mt. Bachelor and the Parkdale site. Also, new maintenance stations were completed during the biennium at Corvallis and Frenchglen.

Surface and shoulder maintenance costs continued to require the major portion of the maintenance dollar. Over 14 million dollars were spent during the biennium on these two items. Last season four oiling crews, five asphalt paving plant crews, and three asphalt paving street crews operated throughout the state. Large dust collectors were designed and constructed by the Equipment Section and have effectively solved the air-pollution problem associated with such plants.



Sanding material is screened and stockpiled for winter maintenance on the Lake of the Woods Highway.

A maintenance program which was developed under the guidance of State Highway Engineer Forrest Cooper has become widely known by all maintenance men as "Cooperizing" highways. This involves improving the areas along the edges of highways and shoulders to do away with deep ditches, trees, brush and other roadside obstructions.

Another noteworthy item during this biennium was the completion of a 21-year history of operating Oregon's "Highway Navy"—the Astoria-Megler ferries. This operation began in 1946 and ended July 29, 1966, when the first cars crossed the Columbia River on the new Astoria Bridge. The "Highway Navy" consisted of the 180-foot M. R. Chessman, the 108-foot M. V. Tourist No. 3, the 98-foot Tourist No. 2, and the 158-foot Kitsap. The appraised value of these vessels at the time they were taken out of service was $348,000, $45,000, $32,000, and $29,000, respectively. The maximum daily traffic recorded to date on the new bridge was 4,554 vehicles in July 1966.

Continued replacement of wooden bridges has resulted in lower bridge maintenance costs. Extensive use of precast, prestressed slabs has proven useful for maintenance widening and replacement. Several bridges were damaged in the past two years by overheight loads, but the most extensive damage occurred when a tug lost control of a lumber barge passing under Bullards drawbridge across the Coquille River on Highway 101. On October 4, 1966, at 3:35 p.m., the bridge was severely damaged requiring closing Highway 101 from that date until October 12. Emergency repairs were completed by maintenance crews working 24-hours a day under the supervision of the State Bridge Superintendent. Final repairs were completed several months later at a cost of $200,000.

Considerable emphasis was placed on highway safety in 1966-67 by the federal government through the Bureau of Public Roads, the American Association of State Highway Officials, and local governmental agencies. The Maintenance Division has long been active in highway safety projects and during the biennium has continued to carry out such projects as widening and paving shoulders, and building school bus turn-outs and climbing lanes. Associated with highway safety, numerous new materials and devices were experimented with during the biennium, including thermoplastic striping, breakaway sign supports, pavement buttons, tungsten carbide and rubber snowplow blades, new sign materials, and highway luminaires with 30-foot cantilever arms.

Damaged pier on Bullards Bridge near Bandon. Pier was struck by a lumber barge. Permanent repair work is completed.

Snow removal equipment keeps traffic moving over the mountain passes throughout Oregon.

Department maintenance crew—operating scoop with new type boom attachment—is maintaining drainage facilities.

Completed highway widening and shoulder paving project on the Wallowa Lake Highway.

A State Highway Department maintenance crew at work on a shoulder improvement project along the Klamath Falls-Lakeview Highway.

SHOULDERS WIDENED AND PAVED

1967	*Div. 1*	*Div. 2*	*Div. 3*	*Div. 4*	*Div. 5*	*Total*
Miles Widened	34.3	30.5	20.0	43.0	67.5	195.3
Miles Paved	45.9	33.0	9.0	69.0	21.9	178.8
1968						
Miles Widened	34.0	40.6	27.0	28.0	55.5	185.1
Miles Paved	25.9	18.3	11.5	42.0	12.0	109.7
TOTAL	140.1	122.4	67.5	182.0	156.9	668.9

NOTE: The above figures do not include shoulders widened and paved by formal contracts.

Two items of maintenance were turned over to the counties during the biennium. First was control of noxious weeds on state highway right of way. This work is now being done by the counties according to their established county codes, with the state reimbursing the counties for their work. The agreements have worked satisfactorily. Second was the maintenance of directional signs on county roads. Most counties now have the necessary men and equipment to handle this work.

The Radio Section of the Maintenance Division currently operates 61 highway base stations, 43 State Police base stations, and 580 mobile units. The number of mobile units remained unchanged, but seven base stations were added, including the installation of four new microwave stations.

In addition to the radio system, the Highway Department operates a teletype system comprised of 26 machines, 9 in the Salem area, 16 in division and district maintenance offices, and one in the Weather Bureau office in Portland. A TWX machine in the Salem headquarters maintenance office provides teletype communications throughout the United States.

ANNUAL MAINTENANCE COSTS PER CENTERLINE MILE FOR VARIOUS HIGHWAYS

Highway	*Surface*	*Fence*	*Shoulders*	*Drainage*	*Structure*	*Roadside Vegetation*	*Traffic Control Facility*	*Roadside Cleanup*	*Snow and Ice*	*Total*
I-5 Urban – 14.96 Miles										
Intst. Br. – S. City Lmts	$ 530	$870	$170	$ 660	$390	$3,750	$3,320	$1,510	$520	$11,720
I-5 Rural – 308.38 Miles										
Portland–California Line	890	310	200	380	80	1,080	800	450	980	5,140
US 101 – 77.22 Miles										
Bandon–California Line	1,397	181	298	1,036	179	278	384	169	24	3,946
US 20 – 54.14 Miles										
Corvallis–Newport	1,567	147	375	324	18	174	282	68	286	3,241
US 97 – 213.60 Miles										
Madras–California Line	577	68	177	150	28	119	349	131	870	2,469
US 395 – 117.67 Miles										
Pendleton–John Day	357	24	178	147	17	68	104	22	564	1,481
ORE 223 – 31.40 Miles										
Dallas–Philomath	265	12	428	384	100	97	131	24	21	1,462
ORE 206 – 84.05 Miles										
Wasco–Heppner	163	34	305	77	44	47	30	7	44	751

STATE PARKS AND RECREATION DIVISION

During the biennium, the State Parks and Recreation Division continued its accelerated program of land acquisition and park development to keep pace with the growing demand for outdoor recreation facilities and services in Oregon.

This demand is evident in the steadily rising attendance at state parks, which is expected to total 40,842,000 by the close of this biennium, a 25% increase over the previous biennium. Day-use attendance is projected at 38,108,000, a 26% increase over the 1965-66 biennium. Camper nights are expected to reach 2,734,000, an increase of 21% over the previous two fiscal years. Estimated day-use and overnight camping attendance for each fiscal year during the biennium is shown in the table below:

Fiscal Year	*Day Visitors*	*Camper Nights*	*Total*
1966-1967	17,747,061	1,319,236	19,066,297
1967-1968	20,360,660	1,415,000	21,775,660
Totals	38,107,721	2,734,236	40,841,957

The construction of over 480 additional overnight camp sites at state parks helped to offset the increased demand by campers seeking this activity, and the turnaway ratio improved slightly over the previous biennium, with one camper turned away for every six accommodated.

Overnight camping rates at state parks were raised during the 1967-68 biennium, the first increase in ten years, during which time overnight camping attendance has increased 338%. Trailer sites with utility hookups now cost $2.00 per site per night; improved tent sites are $1.50; and unimproved sites are $1.00. In spite of the increase in fees, overnight camping attendance is expected to reach a new high during fiscal year 1968.

A camp assignment program was instituted during the biennium, which has resulted in better control of vehicles in the campgrounds and a more efficient overnight camping system.

Land acquisition for state park purposes totaled 4,109 acres during the 1967-68 biennium, of which 2,636 acres were leased or acquired from the federal government at a greatly reduced cost to the state. Nine new areas containing 1,432 acres were added to the state parks system. Major acquisitions included Succor Creek State Recreation Area, 720 acres, about 38 miles south of Nyssa; Memaloose State Park, 337 acres, along Interstate Highway 80N, 9 miles east of Hood River; and Gateway State Wayside, 285 acres, along U.S. Highway 199, 42 miles south of Grants Pass. The remaining six areas were acquired under the beach access program which is being undertaken to provide parking, rest stations, and access to the beach at key locations along the coast. These new areas include Seven Devils, 54 acres; Gleneden Beach, 17 acres; "D" River, 4 acres; Rockwood Beach, 9 acres; Tolovana Beach, 3 acres; and Rockaway Beach, 3 acres.

In addition to these areas, 2,677 acres were added to 24 existing parks during the report period. These additions varied in size from the 1,170 acres gained at Fort Stevens State Park to the 0.2 acre acquired at Lincoln Beach Wayside. Other additions include Minam, Hat Rock, Hilgard Junction, Nestucca Spit, Smith Rock, Silver Falls, La Pine, Mary S. Young, Baldock, Cow Creek, Dabney, Deschutes River, Sunset Bay, Ecola, Chandler, Ona Beach, Nehalem Bay, Bandon, Lost Creek, Viento, Holman and Fogarty Creek. Oregon now has 210 state parks, waysides, monuments and recreation areas, totaling 74,500 acres.

Because of the ever-increasing demand for overnight camping facilities, three new campgrounds were among the major park development projects completed during the 1967-68 biennium. Forty-five new camp sites were constructed at Ainsworth State Park in the Columbia Gorge, 37 miles east of Portland; and ninety-five sites were constructed at La Pine State Recreation Area on the Deschutes River, 25 miles south of Bend. All of the sites in these campgrounds contain electricity, drinking water and sewage connections for trailers, and are easily accessible to utility buildings with showers, toilets and laundry rooms. A new semi-improved campground at Goose Lake State Recreation Area, 16 miles south of Lakeview, contains 30 tent sites, drinking water and toilet facilities. All three campgrounds will be ready for use during the 1968 camping season. Day-use facilities were also constructed at La Pine and Goose Lake in conjunction with the overnight camps.

New marina facilities at the Cove Palisades State Park on Lake Chinook.

In addition to the new campgrounds, several existing camps were expanded. One hundred and seven sites were added at Fort Stevens, 67 at Wallowa Lake, 66 at Beverly Beach and 38 at The Cove Palisades, with each addition providing utility buildings and trailer hookups. The campground at Viento was also opened, providing an additional 35 sites. The new and expanded campgrounds resulted in a net increase of 483 camp spaces, for a total of

3,765 camp sites in Oregon's state parks.

In addition to overnight camping facility expansion, the following park projects were completed during the biennium:

The Cove Palisades–Marina concession building, bathhouse, roads and parking.
Wallowa Lake–Marina concession building, registration building, trailer dumping station, parking.
Detroit Lake–Bathhouse.
Carl G. Washburne–Bathhouse.
Ecola–Toilet Building.
Ainsworth–Trailer dumping station, roads.
La Pine–Bathhouse, registration building, trailer dumping station, 2 bridges, roads and parking.
Milo McIver–2 bathhouses, roads and parking.
Lewis and Clark–Toilet building.
Starvation Creek–Toilet building, parking.
Cline Falls–Toilet building.
Ontario–Toilet building, boat ramp, parking.
Holman–Toilet building, parking.
Sunset Bay–Bathhouse, water system improvement, sewage disposal plant.
Fort Stevens–Camp registration building, trailer dumping station.
Yaquina Bay–Toilet building.

Other improvements completed at nearly every state park in Oregon during the biennium included installation of entrance signs, footbridges, play areas, water systems, landscape plantings, boat docks and launching ramps, fencing, trails and parking areas.

As a result of the dedicated efforts of park personnel in the field, state parks were maintained at a high standard of cleanliness in spite of the increased number of visitors.

The Engineering Section of the State Parks and Recreation Division prepared field surveys and contract plans for major facilities that were constructed during the biennium, including new and expanded campgrounds, utility buildings, toilet and bathhouse buildings, marina concession buildings, roads, and water system improvements. The Parks Planning Section investigated a number of areas to determine their suitability for possible inclusion in the state parks system; made master plans of several parks; designed landscape planting plans to enhance the natural beauty of new and existing park developments; produced plans for various park facilities and layouts; and undertook a variety of activities, including preparation of special studies, public information programs, interpretation programs and cooperative endeavors with other agencies.

The Parks Historian expanded various phases of the historical program during the past biennium, including the investigation of historic sites for suitability as state parks, preparation of brochures and other interpretive materials, cooperation with the National Park Service and the Oregon Historical Society in research and publication of special studies, consultation with local historical groups, and collection of historical photographs pertaining to highways and parks.

During the biennium, the park information program was expanded to provide a wider variety of interesting and educational activities for park visitors. Several new outdoor theaters were constructed, making a total of 12 permanent theaters at the major campgrounds. Attendance at slide show programs continued to increase with over 250,000 park

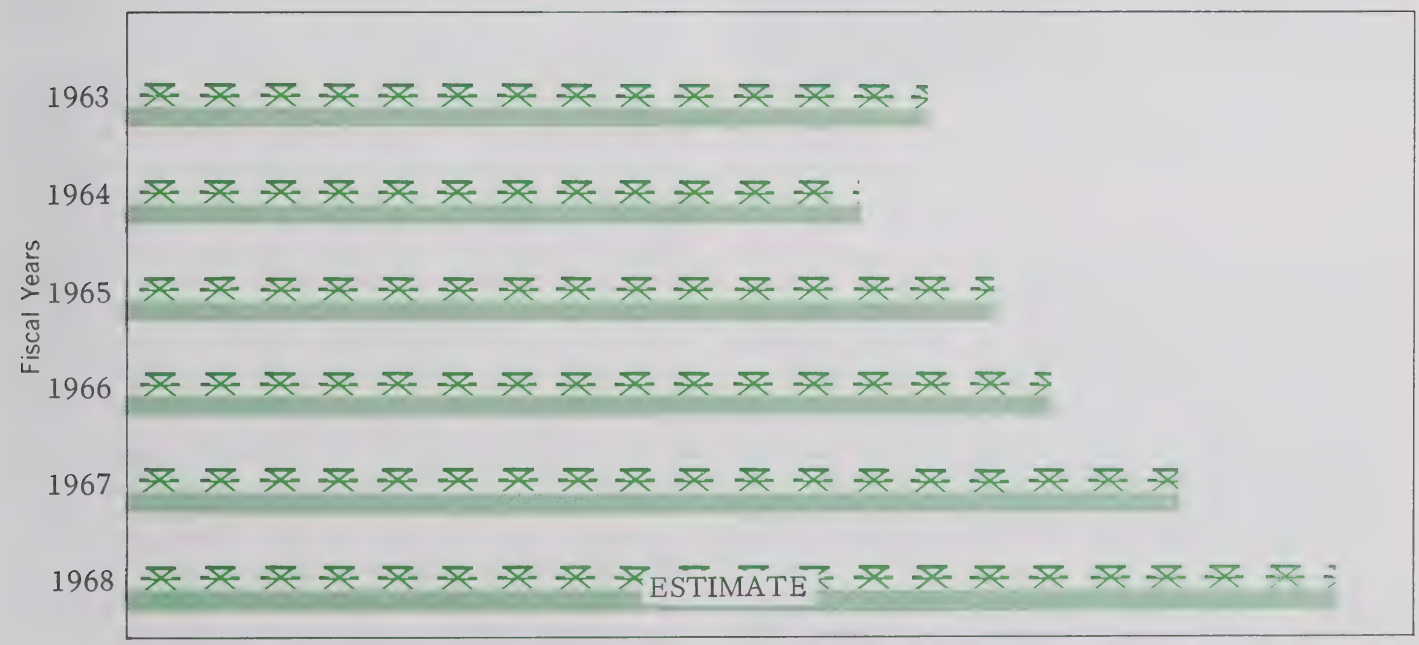
Day use area at Ontario State Park along the Snake River. Facilities include picnic area, boat ramp, parking facilities and a rest station.

Overnite camp expansion at Beverly Beach State Park along the Oregon Coast Highway.

OVERNIGHT CAMPING

ATTENDANCE AT OREGON STATE PARKS

DAY—USE



visitors enjoying these evening programs during the biennium. New self-guiding nature trails were completed at Cape Lookout and Collier Parks, with several other trails being planned for development in the near future. The Oregon public parks brochure was revised to include 483 state parks and waysides, safety rest areas, U.S. Forest Service campgrounds, Bureau of Land Management areas, national parks, state forest areas, county parks and private parks. Other informational material printed during the biennium included individual park brochures, leaflets, interpretive signs, display boards, maps and plant markers. Numerous requests for information from individuals, agencies, map companies and travel guides were answered as a part of the public information program.

Memaloose Safety Rest Area and site of future overnight park development along the Columbia River Highway west of The Dalles.

The State Recreation Director's office expanded its programs of assistance to counties, cities and other agencies. Some of the areas in which assistance was provided were park administration, facility design and layout, financing, legislation and recreation programs. Much time was also devoted to personal communication with local government agencies in speaking engagements, workshops, conferences, committee participation, and publications–including "Oregon Recreation Briefs" and "Oregon Recreation Views".

The revised State-Wide Comprehensive Outdoor Recreation Plan, Part III, was completed under the direction of the Recreation Director during this biennium. The plan was approved by the Bureau of Outdoor Recreation and will enable the state to continue to receive money from the Land and Water Conservation Fund. The plan presents a comprehensive picture of Oregon's present and future outdoor recreation supply, demand, and need; gives an action program to help satisfy these demands; and provides guidelines for the orderly development of outdoor recreation facilities and programs for the enjoyment of Oregon's residents and visitors now and in the future.

During the biennium, state and local agencies continued to receive matching funds for the acquisition and development of recreation areas and facilities from the Land and Water Conservation Fund program. Approximately $3,177,000 has been apportioned to Oregon since 1965, with $1,422,430 obligated to state projects and nearly $415,000 obligated to local projects.

The "Greenway Bill", HB 1770, passed by the 1967 State Legislature, was an important law affecting future recreation in Oregon. This statute set up a program to establish a Willamette River park system extending from the Dexter Reservoir in Lane County to the Columbia River, as well as a grant-in-aid program under rules and regulations to be promulgated by the State Highway Commission. The Governor's Executive Order 67-2 directed that a special citizens' committee be organized for the purpose of developing a comprehensive plan for preservation, public access, use and permanent recreation enjoyment of the area. Under the order, the State Highway Commission is to administer, implement and carry out the policies, plans and programs of the committee. Mr. George W. Churchill, formerly with the U.S. Forest Service in Portland, was appointed director of the program.

Another important law dealing with recreation passed by the 1967 Legislature was the "Beach Bill", HB 1601. This law is intended to guarantee free and uninterrupted public use of Oregon's ocean beaches. It specifies that no person shall erect, make or place any structure or improvement on any property along the Pacific Ocean located between extreme low tide and the elevation of 16 feet following natural contour lines without the permission of the Oregon State Highway Commission. After applying for a permit, a hearing may be held to determine if an applicant is to be allowed to make the desired improvements. During the first 18 months of this biennium, two applications were received by the Highway Commission; one was granted and one was denied.

During the 1967-68 biennium, the State Parks Advisory Committee held seven meetings and made two inspection trips. The committee, with extensive experience and knowledge of outdoor recreation problems in Oregon, continued to provide valuable assistance to the staff of the State Parks and Recreation Division in developing programs and policies to better serve the public. Members of the Advisory Committee are Loran L. Stewart, Chairman, Eugene; Donald G. McGregor, Vice-Chairman, Grants Pass; Alfred D. Collier, Klamath Falls; Ernie R. Fatland, Condon; Lestle J. Sparks, Salem; George D. Ruby, Portland; Eric W. Allen, Jr., Medford; P. M. Stephenson, Salem; and Warren McMinnimee, Tillamook.

Nature struck another blow at Oregon's state parks during the biennium, when a combination of extreme high tides and a severe storm combined to produce high water along the coast. "D" River, Fogarty Creek, Beachside, Cape Lookout, Ona Beach and Beaverly Beach all received some damage from high water and drift logs. However, damage was not extensive and rapid cleanup soon had all parks back in shape.

OFFICE ENGINEERING DIVISION

The Office Engineering Division primarily is responsible for the administrative details of budget planning, roadway design, preparation of final specifications prior to contract awards, and federal-aid programming. The Office Engineering Division also includes the Engineering Graphics, Mileage Control, and Statistical Sections, whose duties comprise a variety of assignments pertaining to highway construction and operation.

During the two-year period January 1, 1966 to December 31, 1967, 25 contract lettings were held, over 1,700 separate bids were received, and 357 contracts totaling over $158,000,000 were awarded. These contracts included 347 miles of grading; 429 miles of paving or oiling; 162 bridges and grade separation structures; park facilities; and miscellaneous contracts for signing, landscaping and traffic signals.

The various sections of the Office Engineering Division play an important part in preparation for receiving bids and awarding contracts, as well as performing a variety of assignments related to highway progress.

SPECIFICATIONS SECTION

The Specifications Section is responsible for preparation of the final special provisions, the proposals for receiving bids, and the quantity estimates on work to be contracted.

Working with other Office Engineering sections and other divisions of the Oregon State Highway Department, the Specifications Section assembles the data necessary for a contract letting.

A revision of the *Oregon Standard Specifications for Highway Construction* is presently being prepared by this section. This publication, along with special provisions developed for individual projects, serves as the basic requirements for all construction.

An additional function of this section is distribution of all contract plans, proposals and special provisions to contractors prior to a contract letting.

ROAD DESIGN SECTION

The final design and preparation of plans for highway construction are responsibilities of the Road Design Section. Proposed projects developed to the preliminary design stage are received from the Construction Division. Final plans are drawn after a complete review of construction features to assure adequate, economical design.

Information supplied by the various divisions of the Highway Department is assembled and evaluated in this section for utilization in the final design of highways. Right-of-way widths and other pertinent information is furnished the Right of Way Division for their use in acquisition proceedings. Critical details are brought to the attention of the Specifications Engineer for inclusion in the special provisions.

The designers of this section handle the planning of construction features on highway projects; the drafting is performed by the engineering technicians. These two units are very effective in establishing a high level of achievement in both quality and quantity of work produced for the accelerated program of highway construction.

Another responsibility of this section is the development of design standards. Standardization of construction design details incorporated in standard drawings is an aid to development of adequate design and is assembled with the contract plans. These standard drawings are a major factor in producing contract plans within a minimum time.

Wauna Interchange on the Columbia River Highway between Portland and Astoria.

FEDERAL-AID SECTION

The Federal-Aid Section programs with the Bureau of Public Roads all construction, right of way, and preliminary engineering projects that will include federal participating funds. Federal funds are apportioned to the various states each fiscal year. Prior to receiving bids on construction work programs, final plans, specifications and estimates are assembled and submitted for review and approval by the Bureau of Public Roads.

STATISTICAL AND FINANCE SECTION

The Statistical and Finance Section handles a variety of details connected with contract awards, contract payments, and special statistical reports.

Payments to contractors for all types of construction during the biennium will total over $130,000,000. Each month progress estimates on all active contracts are processed by this section for payment to contractors for work performed. Complete records are kept on all contracts from the time of award until the contract work has been accepted by the Highway Commission and final payment is made to the contractor.

Data is compiled for preparation of the annual, biennial and other special reports concerning statistics on highway

construction and operation. Special requests from individuals, businesses and governmental agencies for road map revisions, statistics, contract data, and general information are also handled by the Statistical and Finance Section.

The typing pool for the Office Engineering Division is maintained by this section.

Record books containing detailed entries of all construction, maintenance and operation expenditures dating back to 1917 are continually updated in this office.

MILEAGE CONTROL SECTION

The Mileage Control Section keeps a current inventory of the mileages on the state and federal highway systems. Also, a continuing study of the physical features of the Interstate System Traveled Way is conducted for future use in planning state and national highway programs.

This section has the responsibility of preparing and revising highway straight-line maps upon which milepoints of specific highway features and roadside culture are identified. In addition, the Mileage Control Section compiles state and federal highway mileage reports, vehicle and ton-mile reports, highway logs, and lane-mile summaries; computes mileages between cities; and drafts various maps and charts of the state and federal-aid highway systems.

Other functions of this section include furnishing data and drawings for use in reports of other divisions, computing mileages for use on highway signs, and conducting special studies as needed for use by the state and the Bureau of Public Roads.

ENGINEERING GRAPHICS SECTION

The Engineering Graphics Section prepares public hearing maps; survey approval maps; application maps for submission to governmental agencies on proposed alignments of highways, and a large variety of charts, sketch maps and graphic illustrations that are required daily throughout the Department.

The demand for contemporary graphics production has continued throughout the past two years with emphasis on the increased use of color and design.

Outstanding among the items produced by the Engineering Graphics Section during this biennium were two brochures, one commemorating the dedication of the Astoria Bridge and the other describing Oregon's needs in highway construction through the next decade.

A new recreation folder was printed showing the locations of and facilities at several hundred boat-launching places throughout the state. This was a joint effort with the Oregon State Game Commission and the State Marine Board.

Considerable effort has been directed to producing visual-aid and other graphic material for the Executive and Legislative branches of the state government.

Other functions of this section include preparing right-of-way drawings on federal-aid projects; and, upon completion of highway construction projects, preparing 1 inch = 400 feet scale construction drawings. The reproduction section prints maps, contract plans, aerial photos, photo enlargements, etc. This section has a wide variety of equipment capable of reproducing any type of print that might be required by the many divisions within the Highway Department.

TRAFFIC ENGINEERING DIVISION

Traffic engineering deals with the operational aspects of the state highway system in connection with existing highway facilities as well as in the traffic planning and operation of future facilities. Traffic interchange plans are reviewed in detail with particular regard to the viewpoint of the vehicle operator and his probable reaction to the specific layout with which he may be confronted.

Existing highway facilities demand continuing attention, with adjustments being made and new traffic control measures being installed to enable the smooth and safe movement of traffic.

Model of proposed railroad grade separation structures on 17th Street and Powell Boulevard in Portland.

TRAFFIC CONTROL SECTION

The Traffic Control Section is responsible for the coordination and review of investigations and the preparation of recommendations on all matters pertaining to traffic control. In order that the final recommendations will be based on fact rather than opinion, the factual tools of the traffic engineer—vehicle speeds, traffic volumes, accident records and physical conditions—are used.

During the biennium, the Traffic Control Section continued with the analysis of motor vehicle traffic accidents. In addition to detailed studies on the state system, written summaries are prepared for distribution by the Department of Motor Vehicles and accident data is furnished on a routine basis to 20 cities and 5 counties. During this biennium, the program utilizing data processing machines to identify hazardous locations which may require investigation and corrective treatment was further refined.

Personnel from this section conduct the requisite engineering investigations and make reports of recommendations for the establishment of speed zones, both for those established by the State Highway Commission and those which are the responsibility of the State Speed Control Board.

The Traffic Control Section also constructs scale models of highway construction projects which are in the planning stage. These models are used in the study of proposed design. They also present to the public an easily understood, three-dimensional picture of highway plans. Numerous displays of the models have been arranged for public agencies and private establishments in cooperation with Public Information. Several of these models have also been used as

exhibits in legal trials.

Another function of this section is to prepare the plans and specifications for sign, signal and illumination projects. During the biennium, plans and specifications were prepared for 60 signal, 33 sign and 23 illumination projects.

PLANNING SURVEY SECTION

The Planning Survey Section is responsible for providing the Highway Department with information concerning the existing and future usage, service and road-user costs of highway facilities, as well as the economics of highway operation and financing and other related highway-oriented statistical data. These activities are a part of the continuing highway planning program conducted in cooperation with the Bureau of Public Roads.

The Planning Survey Section is composed of three units: the Urban Studies Unit, the Traffic Survey Unit, and the Economic Unit.

Urban Studies Unit—The Urban Studies Unit is responsible for conducting area-wide transportation studies in urban areas. The Federal-Aid Highway Act of 1962 requires that to receive federal-aid funds to construct highways in urban areas having a population of 50,000 persons or more, the project must be based on a cooperative, comprehensive and continuing transportation study. The plans developed from these transportation studies are based on the analysis and interpretations of pertinent data concerning existing conditions and historical growth of the area, the establishment of community goals and objectives, and the forecasting of future urban development and future travel demands. It includes not only the initial preparation and evaluation of a transportation plan through an appraisal of practicable alternatives, but also periodic review and modification to meet changing conditions. In addition, the study includes the preparation and dissemination of pertinent information needed by official agencies in their consideration of planning proposals and improvement programs and for the encouragement of public understanding and support. These studies also include recommendations concerning the scheduling and financing of highway improvements, coordination with other urban development programs, and

One of the many problems that must be solved by Traffic Control is disbursement of large volumes of traffic found at public gatherings like this at the new University of Oregon football stadium.

Channelized intersection with signal control on the Junction City-Eugene Secondary Highway and the Belt Line County Road junction north of Eugene.

the revision of ordinances and regulations, if necessary.

There are continuing transportation studies being conducted by the Planning Survey Section in cooperation with the local jurisdictions in the three urban areas of Oregon which fall under the Highway Act; they are Portland, Salem and Eugene-Springfield.

In addition to these three major transportation studies, five areas with central city populations under 50,000 persons now have transportation studies in progress. These are Medford, Corvallis, Roseburg, Grants Pass and Albany.

Traffic Survey Unit—The Traffic Survey Unit compiles traffic volume information to determine the existing traffic patterns on the state highway system as well as the federal-aid secondary county system. The traffic count data are based on 24-hour volume counts at selected locations adjusted to represent the average daily traffic for one year. The adjustments are based on detailed and continuous traffic volume counts obtained at 108 permanent traffic recorder locations.

The traffic volume data are used in planning for new construction as well as accident studies, taxation studies, and traffic control studies.

The out-of-state tourist expenditures study is conducted by the Traffic Survey Unit, which is also responsible for other related traffic studies; e.g., vehicle classification studies and truck weight studies.

Economic Unit—The Economic Unit is responsible for working in cooperation with local planning agencies in conducting the land use and socioeconomic portions of the various urban transportation studies.

In addition, statistics on motor vehicle registrations, highway taxation and vehicular miles of travel are compiled and future projections of these data are estimated.

It is also the responsibility of this unit to conduct all economic studies made by the Highway Department. These include the economics of route selection, highway taxation studies, road costs and life expectancies and future traffic projects. This unit is also responsible for reviewing statistical data in other studies conducted by the Highway Department.

PERMITS DIVISION

The Permits Division, under the supervision of the Director of Permits, is responsible for issuance of permits for (a) construction and maintenance of utilities and miscellaneous operations or facilities that encroach upon or cross over state highway right of way or property; (b) construction of road approaches to state highways; (c) operation of oversize or overweight vehicles or combinations of vehicles over state highways; and (d) outdoor advertising along but outside of state highway right of way. In addition, the Permits Division is headquarters for the Scenic Area Board.

Assistance in the form of field investigations and supervision of permittee operations is provided on a state-wide basis by personnel of the Maintenance Division.

UTILITY & ROAD APPROACH PERMIT SECTION

During the biennium, 1,400 utility permits were issued for construction and maintenance of pole lines or pipe lines along or across state highway rights of way and over state park property. Also issued were 140 permits to perform miscellaneous operations on state highway right of way, including leveling and minor landscaping, installation of water gauges and installation and operation of log-scaling stations. Thirty-five permits were issued for signs of a noncommercial nature as provided for under ORS 377.360.

Oregon statutes require that any person wishing to construct an approach road to a highway must first secure a written permit. Complying with this law, 1,600 road approach permits were issued during the biennium. Applications for these permits are originated by the appropriate District Maintenance Superintendent and submitted to the Division Engineer for review. The permits Division headquarters in Salem makes a final review and issues the permit. Field investigations and general supervision related to these permits are handled by the Division Engineers and Maintenance Superintendents. Authority to issue permits for banners and parades in connection with local civic enterprises has been delegated to the Division Engineers.

TRANSPORTATION PERMIT SECTION

The Highway Commission has authority to issue transportation permits authorizing operation of vehicles, or combinations of vehicles and loads, having a size and/or weight in excess of that allowed by Oregon law.

The law further delegates to the Highway Commission authority to adopt a resolution authorizing without written permit operation of oversize-overweight vehicles of specified types over designated highways. The resolution is revised from time to time as additional highways or highway sections are proved capable of accommodating the larger vehicles or combinations of vehicles. A coded map is made available to the industry indicating the types, length and weight of authorized vehicles and highways over which they may be operated without permit. Permits are issued on a continuing basis for operation of vehicles not included in the resolution and for truck and pole trailer combinations having an overall length in excess of the maximum authorized by the Commission resolution or for operation of these vehicles on highways not indicated by the resolution.

The transportation permit headquarters is located in Salem. In addition to the Salem office, there are 22 field offices conveniently located throughout the state with authority to issue transportation permits.

The total number of transportation permits issued in 1966 was 40,267. These included 2,895 general hauling, logs, poles and piling; 32,473 oversize and/or overweight single trip; and 4,899 oversize and/or overweight continuing operation. This compares with 35,759 permits issued in 1965, and 29,489 issued in 1964.

WEIGHMASTER SECTION

The weighmaster section, directed by the Chief Weighmaster, is divided into field, office and technical scale maintenance forces.

The 65 weighmasters in the field force are divided among seven weighmaster districts, and are stationed in varying numbers at 23 locations over the state. They work irregularly scheduled hours manning 61 stationary scales and 30 sets of portable scales in carrying out an inspection and weighing program. This program is designed to enforce compliance with statutory truck weight and dimension laws, related safety laws, provisions of transportation permits and provisions of Highway Commission resolutions. Statistical information is also gathered through this program. The data recorded on weight reports are used by the Public Utility Commission and the Highway Department for informational reports and studies.

The scale technician is responsible for the maintenance and repair of stationary and portable scale mechanism. Through the Chief Weighmaster, he also makes recommendations to District Maintenance Superintendents regarding maintenance of scale approaches, buildings, lighting systems, and related equipment.

An average of over 554,000 trucks and combinations of vehicles were weighed in each of the five years preceding 1967. A record of each truck weighed is made on punch card by the Public Utility Commission, and a record of each violation for which a citation was issued is made on a punch card by the Highway Department. Through use of the data processing equipment at the Public Utility Commission and the Highway Department, information from these cards is used to prepare comprehensive reports for use by the Legislature, the Highway Department, Public Utility Commission, other state agencies, and the trucking industry associations that are interested in the construction and maintenance of good highways. The data from this source has been invaluable to legislative and interim committees concerned with the updating of truck size and weight laws. The punch cards prepared by the Public Utility Commission remain with that agency and are used as an aid in auditing records of carriers subject to the weight-mile tax.

A summary of principal statistics obtained from annual reports for the years 1962 to 1967 follows:

SUMMARY OF PRINCIPAL STATISTICS

LOGS, POLES, PILING

	1962	*1963*	*1964*	*1965*	*1966*	*1967*
Loads Weighed	272,748	197,580	212,726	236,244	206,440	220,729
No. of Weight Violations	3,376	2,950	3,756	3,898	3,756	3,761
% of Violations	1.24	1.49	1.77	1.65	1.80	1.70
Fines & Costs (Total)	$214,862	$161,626	$179,727	$192,109	$170,405	$153,105
Fines & Costs (Average)	$65.69	$57.51	$50.67	$51.41	$48.26	$47.50
Cases Pending as of Annual Report	105	140	209	161	225	323

OTHER COMMODITIES

Loads Weighed	433,444	331,325	325,934	349,252	395,481	378,657
No. of Weight Violations	3,800	2,781	1,971	2,599	3,455	3,552
% of Violations	.88	.84	.60	.74	.90	.94
Fines & Costs (Total)	$166,938	$121,893	$92,286	$121,706	$134,960	$130,160
Fines & Costs (Average)	$45.66	$47.31	$46.82	$50.17	$41.45	$40.00
Cases Pending as of Annual Report	144	205	208	173	199	298

1966–Grand Total of 788 nonweight violations–from 747 cleared cases, $10,626.50 received.

1967–Grand Total of 910 nonweight violations–from 855 cleared cases, $12,794.60 received.

In addition to duties listed above, the weighmasters also perform all field work done in connection with quarterly tourist revenue studies and annual truck weight studies made by the Highway Department Traffic Division. They make many of the more complicated vehicular counts required by the Traffic Division when making highway use studies, and they are called upon from time to time to perform other duties for which they are peculiarly fitted by a knowledge of vehicles, highway systems, highway safety practices and vehicle laws gained through their weighmaster training.

OUTDOOR ADVERTISING CONTROL

The 1963 Legislature transferred control of advertising signs along state highways outside of incorporated cities from the Bureau of Labor to the Highway Commission. Signs within incorporated cities are under jurisdiction of the appropriate city government. The Outdoor Advertising Supervisor is in charge of these operations and is assisted by weighmasters and maintenance personnel throughout the state.

In order to provide a basis for administering the Outdoor Advertising Act and related statutes, a complete inventory of signs was taken. The initial inventory revealed a total of 11,250 signs, of which 5,100 were under permit. The sign inventory now indicates a total of 5,910 signs, with 5,237 covered by permit. Of the 5,237 signs under permit, 2,626 represent new and revised permits issued since September 3, 1963; the balance being renewals of existing permits.

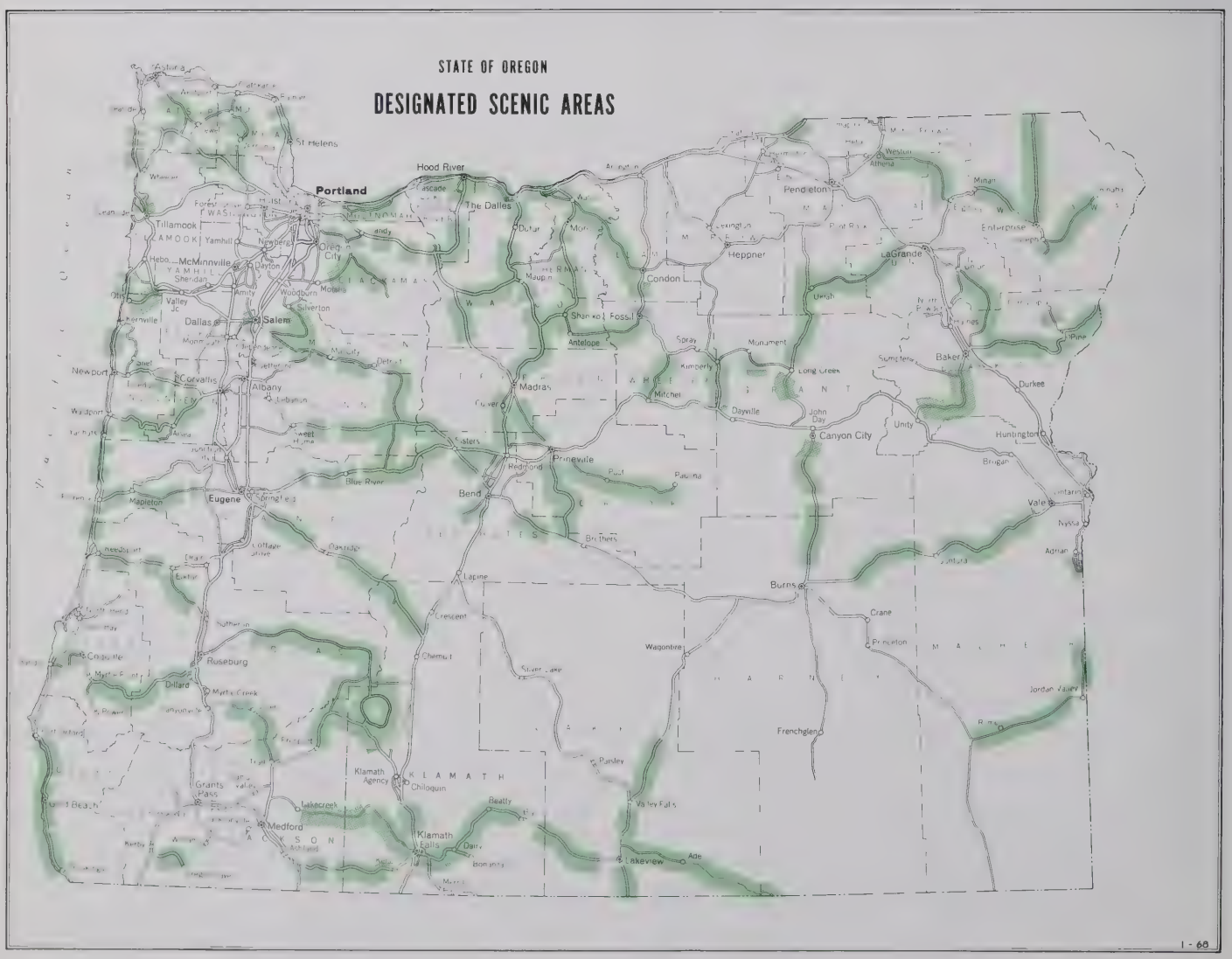
Persons engaged in the business of outdoor advertising are required to obtain annual licenses. These licenses are issued by this section in addition to individual sign permits.

The implementation of sign controls in protected areas of the interstate highway system has qualified the state for a 1/2 of 1% bonus payment of federal funds for construction projects on certain sections of the interstate system. As of July 1, 1968, the Department has received $206,418 in bonus payments.

The Highway Beautification Act of 1965 requires more stringent control of outdoor advertising signs along interstate and federal-aid primary highways than is permitted by existing state laws. Compliance with provisions of this act will require enactment of new legislation in 1969. Failure to comply with the federal law will result in a 10% reduction of the state's apportion of federal-aid highway funds.

SCENIC AREA BOARD

The Scenic Area Board, consisting of seven members



appointed by the Governor, was created by an act passed by the 1961 Legislature. By law, the Board consists of two members at large representing the public and one representative from each of the following groups: (a) motoring clubs, (b) labor organizations, (c) outdoor advertising industry, (d) Oregon State Highway Commission, and (e) roadside service industries.

The Board has the power to establish or vacate scenic areas adjacent to or along public highways. A scenic area is defined as "an area adjacent to or along a segment of a public highway that is within a federal or state park, is a site of historical significance, or affords a view of unusual natural beauty, and has been established as a scenic area by the Scenic Area Board".

A triple truck-trailer combination now in limited operation in Oregon.

The Highway Department's responsibility to the Board is to enforce its orders and render administrative assistance. Once a section of highway is designated a scenic area, no new sign permits may be issued on that section. Existing legally erected signs are allowed to remain up to seven years before removal is mandatory.

To date the Board has acted on 107 petitions covering 3,797.93 miles of Oregon highways. Final orders of the Board approved 2,513.89 miles, withdrew 6.43 miles, denied 1,284.04 miles, leaving 2,507.46 miles now designated as scenic areas.

COUNTY AND CITY DIVISION

The primary function of the County and City Division is to act as liaison between the State Highway Department, the 36 counties, and the 227 incorporated cities within the state. In addition, the County and City Division has been approved by the Bureau of Public Roads as a "secondary road unit" as required in Section 2 of the Federal-Aid Road Act of 1950, which act provides that each state shall establish an administrative and engineering unit functioning within the state highway department organization. This unit establishes and maintains cooperation between the State Highway Department and the counties in selecting extensions to the federal-aid secondary system, in selecting projects and determining standards for the improvement of projects, and in supervising the construction and maintenance of such projects.

COUNTY FEDERAL-AID SECONDARY PROGRAM

The federal-aid secondary system is presently comprised of 3,530 miles of state highways and 4,650 miles of county roads. Only highways or roads designated as part of this system are eligible for projects partially financed from federal-aid secondary funds as apportioned by Congress. The system is subject to revision by agreement between the state, counties and federal government.

Beginning with federal fiscal year 1954, federal regulation requires that 50% of federal-aid secondary funds be spent on the county road portion of the federal-aid secondary system. An allocation of funds is made to individual counties based on a formula developed by the Association of Oregon Counties and approved by the State Highway Commission. The formula provides that 25% of the funds available be divided equally among the counties, and the remaining 75% be divided as follows: 80% according to rural population and 20% according to county road mileage.

The State Highway Commission handles the preliminary engineering and the counties acquire all right of way and material sources. These costs are over and above the state and county participation in the construction projects and permit all available federal funds to be applied toward construction. Construction cost participation on the federal-aid county road projects is approximately 60% federal funds, 20% state funds, and 20% county funds.

From July 1, 1966 to June 30, 1968, twenty-two construction projects were programmed for contract under the supervision of the Oregon State Highway Commission on county road FAS routes lying outside primary and secondary state highway systems. These projects were located on the county road portion of the federal-aid secondary system and were contracted under cooperative agreements with the State Highway Department and the respective counties. The projects, amounting to approximately $5,325,000, are located in 22 of the 36 Oregon counties and involve 23.37 miles of grading, 14.56 miles of stone base and surfacing, 19.79 miles of oil mat wearing surface, 12.02 miles of asphaltic concrete paving, the construction of 25 structures, and 3 signal installation projects.

CITY ALLOCATION OF HIGHWAY REVENUES

The 54th Legislature increased from 10% to 12% the amount of the Highway Fund appropriated for incorporated

cities. This increase became effective October 1, 1967. From this appropriation, $250,000 is withdrawn each year and set up in a separate account to be administered by the Commission. The remainder of the appropriation is allocated to the cities. Each city receives an amount equal to the ratio that its population bears to the total population of all incorporated cities. Population is determined by the latest official enumeration of the State Board of Education's Center for Population Research and Census.

SPECIAL $250,000 CITY ALLOTMENT FUND

Each year the Highway Commission contracts and supervises construction for the betterment of streets in selected cities having populations not exceeding 5,000. This construction is financed by an annual withholding of $250,000 from the regular state tax street fund. This account is programmed each year by the Commission for improvement of city streets not a part of the state highway system which are receiving excessive wear through sudden increases in population in the area or are receiving heavy and unusual traffic. The maximum amount any one city may receive from this fund in any one year is $25,000. If a project exceeds this limit, the city pays all additional costs.

From July 1, 1966, to June 30, 1968, projects were programmed for improvement of 34 city streets in the following cities: Arlington, Canyonville, Clatskanie, Creswell, Dayton, Detroit, Dufur, Glendale, Gold Hill, Haines, Hubbard, Jacksonville, Lafayette, Metolius, Milton-Freewater, Mt. Vernon, Philomath, Pilot Rock, Powers, Sandy, Scappoose, Silverton, Sutherlin, Sweet Home, Talent, Turner, Umatilla, Vale, Veneta, Waldport, West Linn, and Yachats. These projects include construction of 3 bridges, 0.66 mile of oil mat, 4.88 miles of asphaltic paving, 4.75 miles of grading, and 3.92 miles of curb construction.

Programmed expenditures for city allotment fund projects during this period amounted to $730,943.

MARINE FACILITIES PROGRAM

Oregon's 53rd Legislature provided $300,000 from the State Highway Fund for grants to the marine facilities program for use during the 1965-66 biennium. During this interim, $294,000 was expended through the various units of local governments. The 54th Legislature extended the program through the 1967-68 biennium and again allocated $300,000 to be disbursed to and expended by the various units of local government. These grants are available to cities, counties or other units of local government on a fifty-fifty matching basis for development of marine parks and facilities in areas easily accessible from state highways. The County and City Division is responsible for distribution of these grants and for the preparation of marine fund facility agreements. The distribution formula is computed on 25% of the grant divided equally among the 36 counties for use by local governments within each county and 75% on a needs-and-use study made by the State Marine Board.

MISCELLANEOUS AGREEMENTS AND RESOLUTIONS

As required by state and federal regulations, the County and City Division obtains and compiles data for use in the preparation of cooperative construction agreements, FAS-county construction agreements, city allotment agreements, abandonment resolutions or agreements, and throughway agreements. Projects prepared for contract award are examined prior to each Highway Commission meeting, and required agreements or resolutions are prepared and executed before the contracts are awarded.

ABANDONMENT OF OLD HIGHWAYS

When a section of highway is to be abandoned due to relocation or realignment, investigations are made to determine proper disposition of these sections. If the old alignment is needed for service to the communities or the people living in the area, the highway is maintained by the Highway Commission at state expense, or by the respective county, or by the state and county on terms as may be agreed upon. When the old alignment is no longer needed to serve the communities or people living in the area, it is abandoned to abutting property owners. The County and City Division gathers data; prepares the agreements, with necessary maps, and submits them to the respective city or county officials and the Highway Commission for execution; and carries through with the appropriate resolutions for adoption by the Commission.

PUBLIC HEARINGS

Prior to acquisition of rights of way for new construction projects or abandonment of old alignments through incorporated cities, it is necessary to notify the city of the intent of the Highway Commission. The County and City Division gathers the necessary field data and, working with the Commission Secretary, notifies the city officials and local newspapers of the action contemplated. After such notification, a public hearing is scheduled if any requests for hearings or objections are made to the proposed action. At these public hearings, persons who favor or oppose the contemplated action are given an opportunity to be heard.

Federal law requires that any state highway department which submits plans for a federal-aid highway project involving bypassing or going through any city, town or village, either incorporated or unincorporated, must certify to the Secretary of Transportation that it has had public hearings or has afforded the opportunity for such hearings, and has considered the economic effects of such a location. Any state highway department which submits plans for an interstate system project must certify to the Secretary of Transportation that it has had public hearings at a convenient location, or has afforded the opportunity for such hearings. When hearings have been held, the state highway department must submit a copy of the transcript of the hearing to the Secretary of Transportation together with the certification.

By reason of these laws, the Highway Department is required to offer the opportunity for public hearings in connection with a large proportion of the projects undertaken; however, the Highway Department has relinquished this responsibility to the county involved in the event of a federal-aid project on the county road portion of the federal-aid secondary system. The Bureau of Public Roads has ruled that a town or village is any place that has a post office, so nearly all

projects of any size are covered by one hearing regulation or another.

After a hearing is completed and the statements have been presented and transcribed, the Department and the Highway Commission give careful consideration to all requests or objections before arriving at an agreement on a final plan.

During the biennium, 32 public hearings were held, and in eleven additional cases no hearing requests were received after opportunities for such hearings had been provided.

Beginning construction of a modern highway between Myrtle Point and Powers Junction on State Highway 42 in Coos County.

The recently completed Celilo-Rufus Section of the Columbia River Highway (I-80N) at Biggs Jct.

The Warm Springs Highway (US 26) near the Town of Warm Springs was damaged extensively by the 1964 Christmas flood. All repair work is completed.

Beginning construction of Interstate 80N at the South Baker Interchange location.

ACCOUNTING DIVISION

The Accounting Division processes and records all financial transactions of the Highway Department. Expenditure of the millions of taxpayers' dollars on highway projects is controlled, regulated and limited by a myriad of laws and regulations. To insure compliance, every financial transaction must be analyzed and recorded to show in detail where the money came from and where it was spent.

The Controller, appointed by the Highway Commission, is head of the Accounting Division. This division is organized into sections according to duties; each phase of the work is assigned to a particular section in order to properly process and record the thousands of transactions. Built in the program is a system of controls and checks between sections to detect and eliminate errors.

Before a claim for payment from the highway fund is approved, it must pass many tests. *Does it meet the requirements of state laws and regulations? Is there Departmental authority to procure the materials or services? Were the materials furnished or services performed as claimed? Are the prices the same as quoted? Is the claim mathematically accurate?* Any questionable points are cleared as quickly as possible, as the aim is to pay all claims without delay.

As claims are processed, each expenditure item is identified by a numerical cost prefix which tells its purpose and nature and is recorded on magnetic tape. From the tape records, cost print-outs may be made in any desired form—current month or cumulative, detail or summary, comprehensive or selective, purpose or nature, regular or special. Each report is specially designed according to need and serves as a management tool for Highway Department administration.

The data processing unit is a section of the Accounting Division that performs as a service bureau for all divisions of the Department as well as other public agencies. Late in 1967, a new IBM 360 system was installed. This "3rd generation" machine, with four magnetic tape drives and four magnetic disc units, provides the capacity, flexibility and adaptability to perform more complex jobs and to do them faster.

An important part of the Controller's responsibility is that of chief budget officer. From both historical data and current factors, an estimate of revenues is produced, and through conference and consultation with administrative and division officials, a detailed and balanced expenditures budget is developed. The Controller also acts as coordinator in conferences and hearings as the complete budget request is reviewed for the Governor's recommendation by the Department of Finance and then considered by the Legislative Ways and Means Committee.

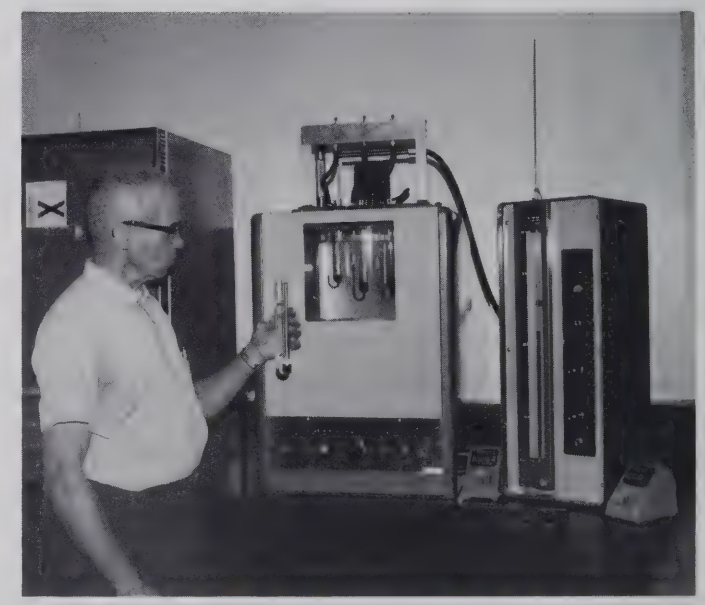
After the budget is approved by the legislature, the Controller keeps a close watch on all budget items, both revenues and expenditures. All division heads and other administrators are regularly informed on their expenditures amounts. If deviations from the projected amounts develop in either expenditures or revenues, corrective measures are worked out in conference with staff administrators.

MATERIALS DIVISION

The Materials Division, under the direction of the Engineer of Materials and Research, has the primary responsibility of documenting the quality of all materials used on construction or maintenance projects and performing materials research. During this biennial period, over 85,000 inspections and tests have been reported. In addition, 36 material research or investigation reports were completed.

Each laboratory report includes the results of all tests and inspection data for a material sample. A report may contain one or several test values. For example, a report of a concrete cylinder test will contain an ultimate compressive strength value only, while an asphaltic concrete aggregate test report may include 40 to 50 separate test values, all of which are necessary for a recommended mixture design. It is estimated that the number of individual tests completed during this biennium totals nearly 300,000.

All sampling, testing and inspection procedures employed are in conformance with specified standard methods. Test results are reliable and comparable to those obtained by other laboratories. The American Association of State Highway Officials Materials Reference Laboratory, National Bureau of Standards, makes periodic inspections of laboratories involved in federal-aid projects. Use of specified equipment and procedures is therefore necessary.



Highway Laboratory equipment used for testing viscosity of paving asphalt.

Functions of the Materials Division are subdivided into several sections, each of which is supervised by a trained and experienced engineer. Each supervisor is responsible for maintaining specified inspection, testing and sampling methods. Sections in the central laboratory at Salem include the bituminous, chemical, concrete, aggregate, research, petroleum, soils,

and office sections. A district materials inspection office is located in Portland for sampling and inspecting numerous items manufactured or distributed in the Portland area.

The bituminous section prepares recommended mixture designs for asphalt concrete surfacing, asphalt treated base and cement treated base construction. The design involves the fabrication and testing of laboratory fabricated specimens of varying composition. Core samples are cut from newly constructed sections and tested for specification conformance. Because availability of quality aggregate is rapidly diminishing, the bituminous section is continually investigating treatment of materials with asphalt or cement for quality improvement. During the past construction season, 72 lane miles of treated aggregate base were completed, one-third of this being asphalt treated and the remainder cement treated.

Soils and aggregate materials sampled from future or current construction projects are tested by the soils section to determine various physical properties indicating load bearing capability. Consolidation, permeability and soil classification tests are made on foundation materials. Embankment or subgrade soils are evaluated to determine the base thickness necessary for traffic support.

Subgrade cover materials are tested for conformance with standard specifications or for establishing a design value indicating load bearing capability. Soils sampled from 23 construction projects were tested immediately prior to or during the past construction season to measure the increase in strength obtained from lime treatment. The laboratory studies resulted in the lime treatment of subgrade soils on four projects. Research currently in progress includes the computation of base thickness from soil, subbase and base material resilient modulus values.

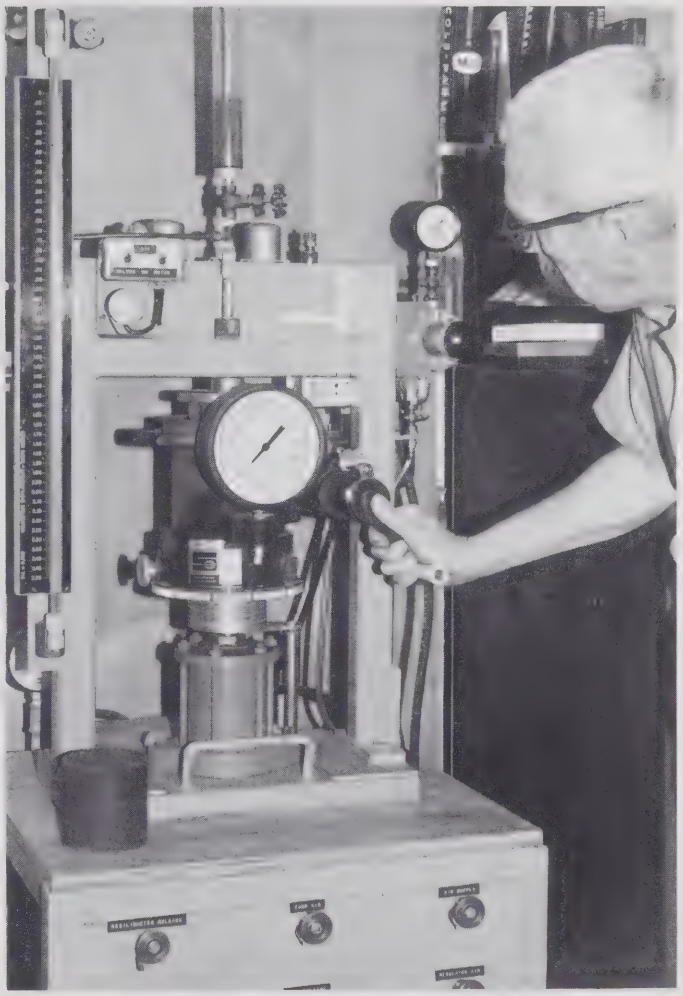
It is the responsibility of the chemical section to make chemical analyses and in some cases physical tests on chemical construction materials. Specifications are established for traffic lacquers and paint purchased by various state agencies. Research in progress by the chemical section includes weathering and testing of several sign background materials.

The portland cement concrete section tests all materials involved in concrete masonry and pavement construction. Trial concrete mixture specimens are fabricated and tested to obtain proper mix proportions and investigate the reaction with use of various additives. Test cylinders from all projects are also tested to determine whether the concrete supplied meets the design requirement.

The aggregate section determines the durability of ledge rock, gravel, and sand samples from prospective sources. Asphalt-aggregate mixtures are tested for asphalt content and aggregate gradation. Research in progress by the aggregate section includes determination of the effect of dust content on the bearing strength of crushed rock and gravel.

Various physical properties of petroleum products are tested by the petroleum section to determine whether materials conform to specifications; e.g., viscosity, solubility and penetration. The petroleum section personnel recently completed research on the effect of additives on asphalt characteristics. A current research study involves the evaluation of new testing methods for asphalt characteristics.

Personnel of the research section performs research not applicable to other sections of the laboratory. Research recently or currently in progress includes: *Experimental Guard Rail Posts, Service Behavior of Asphaltic Concrete Pavements, Sign Illumination, Pavement Seal Coatings, Statistical Analysis of Concrete Cylinder Strength Test Results, Statistical Analysis of Pavement Thickness, Bridge Beam Loading,* and *Tunnel Reinforcing Rib Loading.*



Testing soil and base material in the Highway Laboratory.

The office section is responsible for material test records and files. The original copy of all sample testing records is maintained permanently in the laboratory files. A tabulated materials record for each contract project is also kept by this section.

The Materials Division maintains a staff in Portland for sampling and inspecting the wide variety of highway products manufactured, fabricated, or warehoused in the area. Materials, such as prestressed concrete beams and steel bridge and sign fabrication, are inspected or sampled before shipment to projects throughout the state.

TRAVEL DIVISION

Tourism continued to grow as a major factor in the state's economy during the 1967-68 biennium, with the Travel Information Division playing an instrumental part in the campaign to lure more visitors to Oregon.

New records in number of visitors, visitor expenditures and visitor inquiries were set during the biennium. Out-of-state travelers spent more than $511 million dollars in 1966 and 1967, as compared to $495 million in the previous two years. Visitors during the latter two years exceeded 13.5 million, as compared to 11.8 million in 1964-65.

Other records were set. During the two years of 1966-67, 390,000 persons wrote to the Highway Department for information about Oregon; most of these requests were a direct result of the state's advertising program. The figure compares to 350,000 inquiries in the two previous years.

The Capitol Guide Service had 68,264 visitors in 1967 to set a new record, edging out the 67,385 record of 1962, when the Seattle World's Fair drew millions of visitors to the Northwest.

The visitors information center in the Capitol Building supplies tourists with travel information as well as guided tours of the State Capitol.

The Department's efforts in promoting tourism received national recognition when the National Association of Travel Organizations honored the Department with its Merit Award. Oregon, one of four states to receive merit awards, was the only state to win for its total promotion program. The commendation stated, "For the total promotion program, which in illustrative and written content, sets a new standard of excellence."

As an additional aid to visitors and to encourage them to stay longer and see more of Oregon, the Highway Department opened three information centers along major highways entering the state. The first was opened in 1966 at the Siskiyou Rest Area alongside Interstate 5, a few miles north of the California border. A few months later, a center was opened at the south end of the new Astoria Bridge across the Columbia River; and in 1967, a third one was opened in Portland adjacent to Interstate 5 at the Columbia River. The centers are popular. More than 15,000 persons made inquiries about Oregon at the Siskiyou Center in its first year of operation, and 26,000 persons the following year. Astoria registered 10,000 visitors in 1967; Portland, opening in late June, registered 6,700 inquiries.

To help in answering these inquiries as well as those from other sources, the Department produced and distributed approximately four million brochures and maps during the biennium. These included four new brochures and complete revision of the state highway map and the major tourist attraction brochure.

New brochures include "Oregon Boating Guide," a guide to boat-launching facilities throughout the state; an information center folder, a guide to the state information centers and to certified information centers at more than 40 chambers of commerce in Oregon; "What to See and Do in Oregon," a 12-page booklet with detailed information about the state for use by local retail and service personnel in answering visitors' inquiries; and "Lewis and Clark Trail in Oregon," the latter produced in cooperation with other states and the Lewis and Clark Trail Commission.

The Department's major tourist promotion booklet, "Oregon, Cool Green Vacationland," was enlarged in size and increased to 32 pages in a complete revision of booklet. In addition, the official state highway map was enlarged in size and detail. More than half a million each of these two publications were printed and distributed. In all, about two million brochures and maps were distributed each year of the biennium.

In addition to its own brochures, the Travel Information Division distributed brochures for chambers of commerce, resorts, travel associations and recreational groups. These were distributed by mail in answer to inquiries and through the Travel Division's display booth at travel shows.

The state's advertising campaign grew during the period. Media costs for fiscal year 1967 were $355,000; for fiscal year 1968 they were $375,000. The increase primarily was due to increased space and time costs in magazines, newspapers and radio and television stations. The Travel Information Division has placed an increasing emphasis on specialized advertising, urging readers to enjoy fall vacations or skiing vacations in an effort to extend the tourist season, and encouraging campers, "rockhounds," photographers, golfers and others to enjoy their hobbies on an Oregon vacation.

Although most of the advertising program was placed directly by the state to encourage visitors to Oregon, a portion was used in a joint-advertising campaign with Washington and British Columbia, urging visitors to take a two-nation vacation in the Pacific Northwest.

Annually, the Travel Information Division places advertisements with about 40 magazines, 100 newspapers, 20 radio stations, and 20 television stations. It is estimated that this direct advertising program reaches a potential audience of some 234,000,000 persons. In addition to direct advertising, brochures were provided to prospective visitors through travel shows in major cities of the nation, through automobile club

and air-line offices, chambers of commerce, resorts and conventions.

In cooperation with the Pacific Northwest Travel Association, each year the Highway Department sponsors a tour of Oregon for three or four travel editors or writers. In 1966 and 1967, three writers each year were taken on a two-week tour. Two represented major magazines, two were from newspapers in Texas and California, and two were free-lance writers selling articles to many publications. Also in cooperation with PNTA, the Department annually participates in about eight travel shows in major cities in the West and Midwest. Oregon literature is distributed from large colorful booths to persons interested in vacation travel in the state.

In addition, the Highway Department's own colorful 20-foot booth was used at travel shows in San Francisco, Portland and Seattle in 1967 to attract visitors and to encourage Oregonians to see more of their own state. In 1968, the booth was used only at the Portland and Seattle shows. However, a 10-foot unmanned booth was used at Los Angeles and San Francisco shows in conjunction with a booth operated by Oregon Holidays, Inc., a nonprofit group interested in the promotion of recreation in Oregon.

Information booth used to distribute travel literature at various shows throughout the Western United States. These booths attract visitors to Oregon, making tourism one of the leading industries in Oregon.

The Department is affiliated with such travel organizations as the Western America Convention and Travel Institute and the National Association of Travel Organizations. The Department also works closely with the newly organized Western Governor's Travel Council and the United States Travel Service.

In 1968, the director of the Travel Information Division was asked to join the President's Task Force on travel to prepare a plan for encouraging Americans to travel at home and to attract more visitors to the United States, in order to help reduce the balance of payments deficit.

As part of its program to encourage and coordinate travel promotion activities within the state, the Travel Information Division annually co-sponsors the Oregon Travel Clinic. Members of the travel industry are invited to attend the sessions to hear discussions of ideas and projects in the field of tourism.

A highlight of the Travel Clinic is naming of the *Travel Man of the Year* and the *Travel Industry of the Year* for Oregon. Frank Jenkins, Klamath Falls–for many years chairman of the Travel Advisory Committee to the Highway Commission–was named *Travel Man of the Year* in 1966. In 1967, Art Kirkham–well-known Portland television personality and well-traveled lecturer on Oregon's beauty and livability–was honored with the award. In both years, the Pacific Northwest Bell Telephone Company won the *Travel Industry of the Year* award for its outstanding efforts in such areas as the "Welcome to Oregon" hostesses at Portland International Airport, participation in Oregon Welcome, Inc., a privately financed tourist promotion program, for its advertising program to attract visitors, and for its tourist information kits containing brochures and phonograph records of the "Sounds of Oregon."

An annual "Company's Coming" program enlisted the participation of some 30 cities each year to clean up and fix up to present a "clean face" for visitors. The cities were invited to submit entries showing the results of their efforts. North Bend won the Governor's Cup in both 1966 and 1967.

The Travel Information Division's three films, "Parks are for People," "Reel Fun in Oregon," and "Vacation Adventures in Oregon State Parks" were loaned to service clubs, travel clubs, school groups and other organizations across the nation. The films were also shown to hundreds of thousands of persons via television, both on local stations and on such programs as the ABC network's "Discovery" and the syndicated show "The American West." In addition to these, Travel Division staff members cooperated with television producers in filming shows about Mt. Hood and the Crater Lake-Klamath Lake area. These later were seen by audiences over a wide area of the nation.

The Division's staff of four photographers took hundreds of scenic and recreational photographs for use in promoting tourism; also, thousands of prints were processed for use by newspapers, magazines and other publications. Color transparencies of similar scenes also are made available for varied publications. In addition to travel photography, the photo staff takes and processes photos for use by the Construction, Maintenance and other divisions of the Highway Department.

The Map Distribution Unit of the Travel Division annually files and stores more than 800 types of technical publications, including city and county map sheets, mileage charts, technical bulletins and related materials. In addition to providing these for Highway Department uses, approximately 20,000 technical map sheets are sold annually to local governments, private industries and others.

The Travel Advisory Committee to the Highway Commission meets periodically to review the travel advertising and promotion campaign. The committee makes recommendations to the Commission, which sets policies for the overall state program. Members of the Travel Advisory Committee are Chairman Frank Loggan, Eugene; Robert P. Booth, Eugene; Robert R. Carey, La Grande; John H. Gallagher, Jr., Corvallis; George M. Henderson, Portland; Frank Jenkins, Klamath Falls; Fred E. Kiddle, Island City; Cliff Knodell, Albany; Howard Lane, Portland; Gerald T. Latham, Medford; William L. Mainwaring, Salem; William Manion, Seaside; Robert F. Nichols, Lakeview; William E. Walsh, Coos Bay; Marion T. Weatherford, Arlington; and Thomas F. Young, Baker.

PERSONNEL DIVISION

The biennium brought continuing stability in the work force of the Department and an added emphasis on training and preparation for formal employer-employee relations.

The Personnel Division continued with periodic salary surveys of other government jurisdictions, and a general salary adjustment for all classifications was made in July of 1967. In October 1967, actual visits with administrative officers of other government agencies on the Pacific Coast were conducted and the comparability of engineering and related technical classifications established firsthand for salary survey purposes. The Association of Engineering Employees of Oregon worked cooperatively with the Department in the conduct of the salary surveys.

An Administrative Review Board, established five years earlier, continued to function during the biennium. This Board consists of the Deputy State Highway Engineer as chairman, the three Assistant State Highway Engineers, and the Personnel Director. The Board met periodically and reviewed and either approved, modified, or denied requests to (1) establish new positions, (2) fill vacant positions already established, and (3) reclassify existing positions. The operations of the Board were considered to be very successful, and 348 requests came before this special Board during the biennium.

Mainly because of the success of this Administrative Review Board, the Civil Service Commission on July 1, 1967, authorized on an experimental basis the delegation of all position classification to the Highway Department, subject to periodic post-audit. This decentralized position classification places the responsibility and authority for day-to-day administration of the classification plan in the hands of the Highway Personnel Division and the Review Board. This delegated authority extends to the use of all established classes irrespective of level, type of work, or organization unit.

The average number of total employees dropped to 3,800, which continues a slow downward trend which first became evident in the last biennium. The total average number of engineers and technicians also showed a continuing downward trend, dropping an additional 40 positions during the biennium. The turnover increased in fiscal year 1967 and then decreased in fiscal year 1968. The average monthly turnover for the 1967-68 biennium was 2.98%; the previous biennial monthly turnover was 2.89%. Continuing improvements in general maintenance practices and maintenance equipment brought about a slight decrease in maintenance personnel, even though there was an increase in the number of lane miles of highway to maintain.

The Highway Department continued to lead all state agencies in the number of employee suggestions during this biennial period. Highway employees submitted a total of 107 suggestions, and awards totaled $1,583. The 1967 Legislative Assembly discontinued the state employee suggestion program, with directions to study such systems further to determine if it should be re-established at a later date.

As in the past, the Department was a prime source for summer employment for college students and recent high school graduates. Approximately 300 students were employed during each summer, with about one half this number working on highway construction projects and the remainder in state parks. The availability of these students for the summer fills a definite need within the Department during the summer construction season. A majority of the students working on construction projects are undergraduate civil engineering students. The students are required to be 18 years of age and must have good driving records.

Collective bargaining as a way of employee relations is relatively new to the public service, but over a period of time it is expected to make a marked difference in the informal relations with employee groups which have existed so long in the past. Because of this new trend in employer-employee relations, the Department has spent considerable time in study and preparation for the new process.

There are two bargaining units in the Highway Department. The General Unit consists of 2,487 employees and is the largest. The Oregon State Employees Association won an election for exclusive representation in this unit during the biennium. The Engineering and Allied Unit has 1,251 employees. Even though this group won an election in May of 1967 giving them exclusive rights jointly with the Oregon State Employees Association in the Engineering and Allied Unit, the Association of Engineering Employees of Oregon decided in August 1967 by official action that they would not seek a contract nor use collective bargaining as a way of conducting employee relations–preferring the previous informal relationship that has existed for so many years in the past. This is considered a tribute to both the employees and the "management" for the excellent and mutually beneficial relationships that have been developed through the years. Such a choice has not been made by any employee group in any other state agency. The Highway Department approached officials of the Oregon State Employees Association in July of 1967 indicating a willingness and readiness to engage in negotiating a contract; as yet the Association has not scheduled an initial bargaining meeting. The State Highway Engineer appointed the Personnel Director, the Maintenance Engineer, and the Right of Way Engineer–with an attorney from the Legal Division as counsel–to serve as the first bargaining team to negotiate a contract. The Department will generally follow the policy that its primary responsibility is to the public, and that the test of any proposal under collective bargaining must, therefore, be whether it is in the public interest; and that the Civil Service system is and should remain

Construction of the Stanfield Safety Rest Area along The Old Oregon Trail (Interstate 80N) in Umatilla County.

VEHICLE ACCIDENT FREQUENCY

$$\text{FREQUENCY} = \frac{\text{ACCIDENTS}}{\text{MILLIONS OF MILES DRIVEN}}$$

PERSONAL LOST-TIME INJURY FREQUENCY

$$\text{FREQUENCY} = \frac{\text{LOST TIME ACCIDENTS}}{\text{MAN-HOURS WORKED (IN MILLIONS)}}$$

the essential basis of the personnel policy of the Department; and that, therefore, collective dealings must operate within this framework.

Recruitment outside the Department was primarily restricted to beginning levels in clerical, engineering, and maintenance positions. Nationwide recruitment was again used for graduate civil engineers, and a reasonable number obtained to work initially in a training capacity; and for the first time in several years, promotional engineering eligible lists were more than adequate.

During the period, 148 honorable service awards were presented to retiring employees. Predictive figures indicated that 332 employees will retire during the next five years. A total of 983 service emblems were presented to employees for service ranging from 10 years to 45 years with the Department.

An employee magazine, *Personnel Observations,* and a newsletter, *Personnel News Briefs,* continued to be published for all employees periodically as an aid to better communications within the Department. Also, with the advent of collective bargaining, publication of a newsletter, *The Center Line,* was initiated as a communication service exclusively for the 275 supervisors with major responsibility for directing the employee work force.

The 3,800 employees of the Department are rated annually as to their efficiency on a form which is of the numerical, performance trait type. This form is initiated by the immediate supervisor. The rating is reviewed and is adjusted by at least two Highway supervisors; the Personnel Division then adjusts all scores statistically to conform to a predetermined average and a fixed deviation from this average. The job performance evaluation is used to determine eligibility for salary increases, to determine order of layoff, and is part of the score in promotional examinations.

Training, particularly in technical areas, was emphasized during this period. The training of graduate civil engineers has not been formal, but all supervisory engineers are instructed to conduct on-the-job training for these men. Special courses in "The Review of Civil Engineering" were arranged by the Department for those preparing for professional registration examinations; and a number of other technical courses were arranged. In the administrative area, Highway employee participation in Civil Service-sponsored courses in work analysis and improvement, supervision, communications, and middle management training was heavy.

The Department "Share-the-Tuition Plan" for employees taking night classes relating to their work was successful, with 352 employees completing classes and the Department sharing tuition in the total amount of $5,225.25.

A program continued in the Construction Division whereby two days each month for the months of November, December, January, February and March have been designated for field engineering crew training sessions. The training sessions range from safety to such matters as the care and use of transits, levels, chains and other field equipment. Also, the Personnel Division assisted in the publication of a Construction Inspectors Manual which will serve a dual function as a book of standards and also as an instructional manual for beginning inspectors in the field.

SAFETY

When the Oregon State Highway Department began keeping records of on-the-job injuries and vehicle accidents in 1947, it was evident that more emphasis was needed on safety. During 1947, there were 48.4 lost-time injuries for every million man-hours worked. In 1950, there were 18.6 vehicle accidents for every million miles traveled by the Department's vehicles.

In the graphs, the downward trend of accidents is well-defined with 1966 shown as the best year to date for prevention of personal on-the-job injuries. Although vehicle accident frequencies have bounced up and down through the years, the frequency rate for that of 1966 was only half of that for 1950. During 1966, Highway Department vehicles traveled almost 25 million miles in performance of the Department's many and varied tasks.

Late in 1967 and in 1968, the Safety Section of the Personnel Division took another step forward with the introduction of training sessions for field supervisors. Subjects covered were communications with employees, proper disciplinary methods, job safety analysis and accident investigations. Supervisors' responsibility for accident prevention was heavily stressed.

The Highway Department's Safety Officer is shown presenting a placque to the Sign Shop Superintendent in recognition of the shop's safety record of two years (1966-67) without incurring a time-load injury.

During the biennium, regional safe driving awards were presented to section maintenance crews compiling the most miles driven under the most hazardous traffic conditions. Crews presented awards in 1966 were: *Salem Section Crew,* Urban Region Award; *Enterprise Section Crew,* Snow Region Award; *Estacada Section Crew,* Rural Award, West of Cascades; and *Baker Section Crew,* Rural Award, East of Cascades.

Regional safe driving awards presented in 1967 were: *Oregon City Section Crew,* Urban Region Award; *Detroit Section Crew,* Snow Region Award; *Forest Grove Section Crew,* Rural Award, West of Cascades; and *Prineville Section Crew,* Rural Award, East of Cascades.

Both the Salem and Forest Grove crews have earned the awards for their respective regions two different times. If either wins a third time, permanent possession of the award is achieved. A new plaque is then made up for that region. The awards are highly coveted and sought after by the various crews.

PUBLIC INFORMATION

It is not surprising that there is considerable public interest in the State Highway Department when one realizes that the Department's biennial budget exceeds three hundred million dollars and that travel on streets, roads and highways in the state surpassed eleven and one-half billion vehicle-miles during the past year. Oregon's development through the years has been closely linked to roads and highways. The need to get highly perishable products to market and the desire of its citizens to move freely throughout the state have resulted in the development of an excellent state highway system.

Because of this intense interest in the activities of the Highway Department, a Public Information office was established, with the primary mission of keeping the people of the state advised of Department activities. To permit a smoother functioning operation in an organization as complex as the Highway Department, it is also imperative that fellow employees have a knowledge of what is taking place. Consequently, the Public Information office attempts to inform employees of Department activities.

The news release is used extensively to accomplish this task. During the biennium, approximately six hundred of these releases were distributed on a wide basis. This distribution was dictated because no longer are the needs of a highway confined to a single state. With the growth of travel and the development of the interstate system, interest in highways has become international.

Not many years ago, distribution of material from the Public Information office was on a limited basis. Today, all of Oregon's news media representatives regularly receive distribution of pertinent information. In addition, many media representatives outside the state have asked to be included on the mailing list. For example, during the highway construction period, the office publishes a weekly "Report of Highway Travel Conditions" which details travel conditions throughout the state. This report goes to more than seven hundred agencies and individuals in the United States and Canada who have specifically asked for it.

The average news release is distributed to approximately three hundred news media outlets including daily and weekly newspapers, radio and television stations, special interest publications and magazines, free-lance writers, government officials, and internally within the Department. Frequently accompanying these stories are photographs and, where the occasion demands it, film clips for the television stations. During the biennium, several magazines and publications of national prominence requested special "in depth" articles concerning Department activities.

With the highways touching the lives of so many in the state, people are anxious to learn all they can about them. As a result, speakers representing the Department are in great demand, and every effort is made to fill each request. Also, with the increased popularity of highways as a subject, people in other fields wish to talk about them and ask the Department for factual information on which to base their talks. This information is readily furnished.

Schools have displayed a renewed interest in highways, and much correspondence is received from students, ranging from the elementary grades through post-graduate college level. Then there is the everyday citizen who is interested in the highway system and writes in to discover more about it. Correspondence from all these groups is answered promptly and thoroughly.

Street improvement in the City of Sweet Home, utilizing city allotment funds.

Films are employed with great success to tell the highway story. In addition to films already available, such as "Behind the Shield," "Between the Mountains and the Deep Blue Sea," and "The Effect of a Freeway on Traffic Operation on Adjacent Arterials," three additional documentaries are in the process of being prepared. These will depict the highly complicated work involved in the construction of three major projects: Interstate 5 through the Siskiyou Mountains, the Astoria Bridge, and the freeway system in the metropolitan Portland area. When completed, all three films will be available for public showing.

During the biennium, the Highway Department observed its 50th anniversary under the Commission form of operation. This Golden Anniversary provided the theme for several exhibits, including the Department's annual display at the State Fair. A brochure highlighting special events of the 50 years was prepared and given wide distribution. Other brochures marking significant accomplishments of the Department were also well received. Assistance was provided in the preparation of several training manuals for use within the Department.

At year's end, a publication entitled "Summary of Activities of the Oregon State Highway Commission for the Year," is prepared with the cooperation of each division of the Department. As its title indicates, this is a report to the people of the state on activities for the past year and to some extent of plans for the coming year. It is accompanied by selected photographs and is distributed to approximately five hundred news media outlets.

Employees can be expected to be aware of what appears in the press in their areas; however, it is difficult for them to keep abreast of editorial comment throughout the state. To provide this service, a daily summary of newspaper clippings is prepared and distributed to the Highway Commission, to Advisory Board members, and to restricted Department personnel throughout the state. Unofficially dubbed "The Highway Clipper," the publication contains reproductions of news stories, editorials and letters to the editor gathered from papers throughout the state. It normally contains six pages.

The staff of the Public Information office is comprised of the Information Officer, his assistant, and a secretary. As indicated above, their activities are many and varied. By promoting the use of all media of communication for the broad dissemination of highway information, it is hoped to increase and develop public understanding and awareness of the entire program.

COMMISSION SECRETARY

The Highway Commission Secretary is responsible for keeping records of all Commission meetings, agreements, contracts and other business of the Commission.

The Secretary's office is divided into four principal divisions: (1) the main office staff, composed of the Secretary, the Assistant Secretary, and three stenographers; (2) the general files, operated by a chief file clerk and two assistants; (3) the technical library, operated by the librarian, and (4) the mailing section, handled by a chief mail clerk and two assistants.

The Secretary's office determines the prequalification of contractors with respect to the size and type of projects upon which they can bid. The size of project each contractor is capable of handling satisfactorily is determined through investigation by the Secretary's office. Those contractors who meet the basic requirements are thus qualified to bid on all contracts within the specified size and limitations.

During the biennium, approximately 1,000 contractors were prequalified, and approximately 9,000 requests for contract plans were checked for prequalification.

When a contract is awarded by the Commission, the Secretary forwards contract forms to the contractor for execution and bonding. After construction begins, claims for labor and materials against the contract are recorded and the contractors and their surety companies are notified of such claims.

Another important function of the Secretary's office is to advertise and record those public hearings which are required in regard to highway and beach encroachments. Transcripts of the hearings are prepared for those interested.

GENERAL FILES

The general files for Commission and administrative records date back to 1917, the beginning of the Highway Commission, and as far back as 1912 under the previous organization. Most of these records are filed on open-shelf filing, using a Remington Rand system of filing by subject.

During the biennium, over 110,000 files were assembled and more than 14,000 requests for information from the files were filled. To avoid overloading the files with unnecessary material, an approved program for disposal of surplus or unneeded records is currently in operation. Approximately 600 duplicate copies are separated and disposed of each week.

During the past two years, a search was initiated to locate all historical photographs pertaining to the development of the highway system. These photographs will be filed for an historical record of achievements by the Highway Commission. As they are located, the photographs are being indexed for easy reference.

TECHNICAL LIBRARY

The technical library, under the supervision of the Secretary, maintains copies of available books and magazines covering all phases of engineering and related subjects, as well as reference material for secretaries and clerical employees. Library service is available to all Highway employees throughout the state.

Interlibrary loan service with most libraries throughout the United States is made available by the technical library. If the location of an item being requested is unknown, the request is forwarded to the State Library for handling.

A periodical receiving record is kept, new subscriptions and renewals ordered, and each periodical is perused for material interesting to Highway personnel. By request, an individual's name is placed on the periodical routing list so that he may regularly receive any designated periodical. A separate card file is kept on articles by Oregon Highway personnel and articles relating to the Department.

A bimonthly list of new books, pamphlets and documents is compiled and distributed throughout the state to Highway employees.

MAILING SECTION

All Salem Highway Building mail is handled by the mailing section. The annual volume of incoming and outgoing mail handled by this section has increased in the last five years from approximately 860,000 pieces in 1963 to 1,025,000 pieces in 1967.

During calendar year 1967, postage for outgoing mail cost over $61,000, more than 4,700 pieces of mail were certified, and 244,622 pieces of mail were machine addressed for distribution.

To facilitate transmittal of mail with minimum effort and expense, mailing lists and addressograph plates are maintained in the mailing section for contractors, suppliers and Departmental personnel.

MANAGEMENT ANALYSIS

The development of new management techniques makes increasing numbers of opportunities available for improving operational procedures and systems of administrative and fiscal management. To maintain our reputation as an efficient and well-operated Department, the Management Analysis Section constantly strives to make available to all divisions alternate methods of operation designed to make the Department's varied administrative responsibilities the most efficient for the least possible cost.

This management improvement function, with over-all responsibility resting with the State Highway Engineer, augments the continuing efforts of all administrators and supervisors to examine their operations for the purpose of updating and improving operations, concurrently reducing cost while gaining efficiency whenever practical.

This biennium has seen the re-emphasis of records management, with continued inventory of Highway Department records and their programmed disposition in keeping with State Archivist procedures.

Forms control has become an important area of records mangement. Evaluation of forms—their need, format and economy of production—is a continuous operation of Management Analysis.

Over 40 studies made up the work of the analysts during this biennium. All divisions were provided with service ranging from facilities planning to division-wide reorganizational recommendations.

An illustrative area of improvement is the use of an electronic system to eliminate duplication of typing effort; i.e., placing the repetitive typing of right-of-way descriptions on magnetic tape. Through increased usage, further benefits from this system are planned for the future.

Another program which has demonstrated its worth has been the evaluation of copy-making equipment. Management

Analysis recommendations for upgrading and controlling copying equipment greatly contributed to identified savings during the biennial period. Efforts to provide economic copy service to the state-wide Highway organization has reduced over-all operating costs.

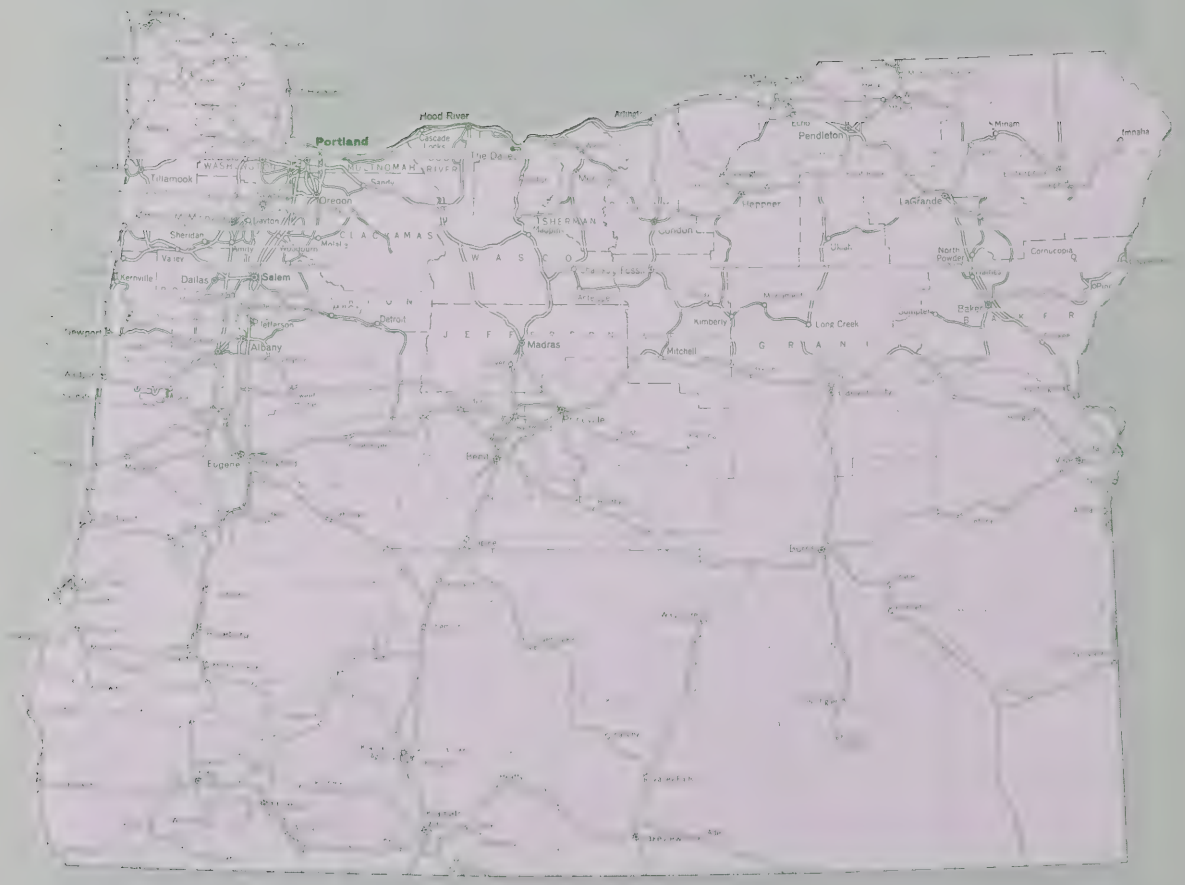
Interagency cooperation between Highway analysts and General Service personnel has led to improved duplication service. Specifications and bid lettings are now being printed and assembled on the most modern and efficient equipment available. This greatly reduces the manual labor involved in these functions, while decreasing the critical flow time required in their issuance. Modification of plate-making equipment has indirectly saved hundreds of man hours of secretarial time by making the procedure from authorship to printed copy easier and more flexible.

The Management Analysis Section employs four full-time people, with backgrounds in various facets of cost reduction that provide a broad base for Department operational improvements. Specific project assignments are directed and co-ordinated through the State Highway Engineer or the Deputy State Highway Engineer. Services of this section are made available by individual administrators requesting technical help in their continuing improvement efforts.

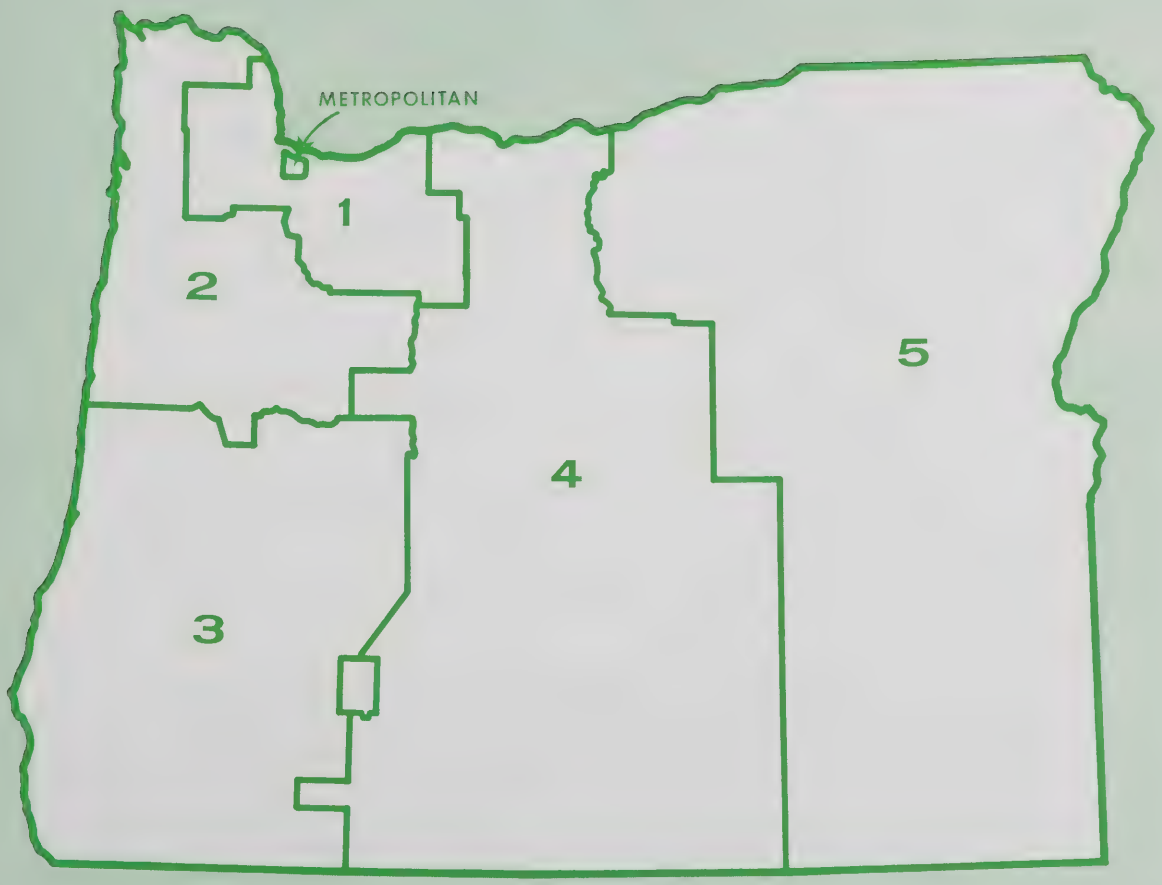
By providing management with increased visibility, more meaningful evaluations and value judgments in the fields of organizational realignments, employee productivity, equipment utilization, work simplification, value analysis and records management can be made.

One of the many scenic areas in southeastern Oregon along Succor Creek in the Owyhee Mountains near Jordan Valley.

STATEWIDE DISTRIBUTION OF



HIGHWAY CONTRACT WORK



DISTRIBUTION OF HIGHWAY CONTRACT WORK

DIVISION
1967
1968

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Scale in Miles

DIVISION I

STATE HIGHWAY CONSTRUCTION PROJECTS

Route Number	*Map Reference Number*	*Project Name*	*Type of Construction*	*Construction Cost*	*Number of Contracts Awarded*
I-5	1	Interstate Bridge	Remove Toll Facilities	$ 23,000	1
I-5	1	Washington State Line-Victory Blvd.	Traffic Surveillance Installation	40,000	1
I-5	2	Wilsonville Interchange and Bridge	Grading, Paving and Structures	4,850,000	1
I-205	3	West Linn Bridge Section	Bridge, Grading and Paving	17,865,000	3
I-80N	4	Bonneville-E. Cascade Locks	Grading, Paving and Structures	6,298,000	2
I-80N	5	Starvation Creek	Roadside Rest Area	110,000	2
US 26	6	N. Plains-Cornelius Pass Road	Grading, Paving and Structures	1,412,000	1
US 26	7	Powell Valley Road-Duncan Road	Screen Planting	4,000	1
US 30	8	Burlington-Portland	Grading, Paving and Structures	2,835,000	1
ORE 6	9	Tillamook and Washburn	Screen Planting	16,000	1
ORE 8	10	West Slope-Beaverton	Grading and Paving	198,000	1
ORE 47	11	Forest Grove-Gaston	Grading and Paving	1,644,000	1
ORE 213	12	Oregon City, 14th and 15th Streets	Traffic Signals	17,000	1
ORE 217	13	Beaverton-Progress	Grading, Paving and Structures	3,824,000	1
ORE 217	14	Tigard to I-5	Roadside Improvement	191,000	2
ORE 224	15	Milwaukie-Harmony Road	Grading, Paving and Structures	3,538,000	1
Beaverton-Tualatin	16	Tualatin River	Bridge	308,000	1

COUNTY ROAD FEDERAL-AID SECONDARY PROJECTS

Route Number	*Project Name*	*Type of Construction*	*Construction Cost*
CLACKAMAS COUNTY			
FAS 681	Harvey Way-Madrona St. (Lake Oswego)	Grading and Paving	$280,000
MULTNOMAH COUNTY			
FAS 940	S.P. & S. Overcrossing and U.P.R.R. Undercrossing	Grading, Paving & Structures	488,000
WASHINGTON COUNTY			
FAS 630	Butner Road-Jenkins Road	Grading and Paving	110,000
FAS 838	Jenkins Road (Beaverton)	Signals	13,000

SPECIAL $250,000 CITY ALLOTMENT PROJECTS

City	*Type of Construction*	*Construction Cost*
Scappoose (Fourth Street)	Grading and Paving	$30,000
Sandy (Hood Ave.)	Grading and Paving	35,000

Reconstruction of the Burlington-Portland City Limits Section, Columbia River Highway (US 30), near Portland.

Construction of a viaduct near the Bonneville Dam for Interstate 80N westbound traffic. Eastbound traffic will use the existing facility through Toothrock Tunnel.

DIVISION I

Division I is the most heavily populated division of the highway system and is located off the west slopes of lofty-peaked Mt. Hood, famous for its Timberline Lodge and excellent ski facilities. Along the northern boundary of Division I flows the mighty Columbia River. The division extends through the fertile Tualatin and Willamette River Valleys to west and south of Portland. Included in this division are the counties of Multnomah, Clackamas and Washington, as well as parts of Columbia, Hood River, Wasco and Yamhill counties.

In the early 1840's, the Barlow party, a group of pioneers, separated at The Dalles; part headed west over Mt. Hood to the Willamette Valley, while the balance of the party attempted to take the water route along the Columbia River. The latter group got only as far as Starvation Creek. In the winter of 1845, they all died from starvation. This site along Interstate 80N is now the location of the Starvation Creek Safety Rest Area.

The past summer has seen completion of several state parks along the Columbia River from Hood River to Portland–Starvation Creek, Ainsworth, Lewis and Clark State Parks, to supplement the existing Viento, Rooster Rock and Benson State Parks which were built a few years ago. The Milo McIver State Park along the Clackamas River is also under construction; this park will open a large recreation area in mideastern Clackamas County.

The new Beaverton-Tigard Route 217 is progressing on schedule and is open to traffic from Progress to Pacific High-

New construction underway on the Beaverton-Tigard Highway to provide a modern connecting link from Interstate 5 to the Sunset Highway.

way (Interstate 5). The next section, from Progress to Beaverton, is under contract and is expected to be opened to traffic in the fall of 1968. The cost of this facility from Beaverton to Interstate 5 will be approximately 7-1/4 million dollars upon completion.

The Forest Grove-Gaston Section of the Tualatin Valley Highway is under contract and will be finished shortly after the end of this biennium.

The last uncompleted section of the Columbia River Highway (Interstate 80N) from Boardman to Portland is under contract from Bonneville to the Multnomah County line. This contract includes widening Tooth Rock Tunnel for eastbound traffic and providing a structure around the cliff above the Bonneville Dam pool for westbound traffic. This project will be completed in 1969, at a cost of approximately $6,000,000.

A $15,850,000 contract for the first section of Interstate 205 (East Portland Freeway), the Willamette River (West Linn) Bridge, was awarded in January 1968. This contract includes 0.64 mile of grading, paving, structures, signing, signals and illumination.

A section of the East Portland Freeway (Interstate 205) in Division I, from West Linn to Pacific Highway (Interstate 5), is expected to be under contract in 1968. This project involves approximately 5.9 miles of grading, paving and structure.

Under contract at present is a section of the Clackamas Highway which involved the construction of four lanes from Milwaukie to Harmony Road Interchange. Included are grading, paving, structures and traffic control devices, at a cost of 3.5 million dollars.

The Burlington-Portland Section of the Columbia River Highway (US 30 West) is under contract for four-laning, grading, paving, structures, and signing. This is a very difficult job, as we are confined between the railroad and river on the north, and sheer cliffs on the south. Existing traffic and numerous landslides have been major problems on this job.

A forest highway project on the Clackamas Highway to replace the Carter Bridge destroyed by the 1964 Christmas flood.

The Cascade Locks-Mitchell Point Section of the Columbia River Highway (Interstate 80N) was completed during this biennium.

As most of the motor vehicle registration in the state is in the tri-county area of Washington, Multnomah and Clackamas Counties, maintenance in Division I is not a small item. Of the 1-1/4 million vehicles registered in Oregon, approximately two-thirds are registered in these three counties which surround metropolitan Portland. There are 870 miles of state highways in Division I, of which 180 miles are of very high-type construction—four- and six-lane expressways and freeways—which require highly sophisticated maintenance. Approximately 200,000 vehicles travel these highways daily.

In this division, the bridge superintendent has two crews working on maintenance. The division bridge superintendent also controls the operation of the Steel and Interstate Drawbridges.

The division traffic engineer and two technicians are kept busy with traffic problems, checking high-accident locations and preparing recommendations for correction. The technicians maintain and pick up tapes of 64 portable and permanent traffic counting machines located throughout the division.

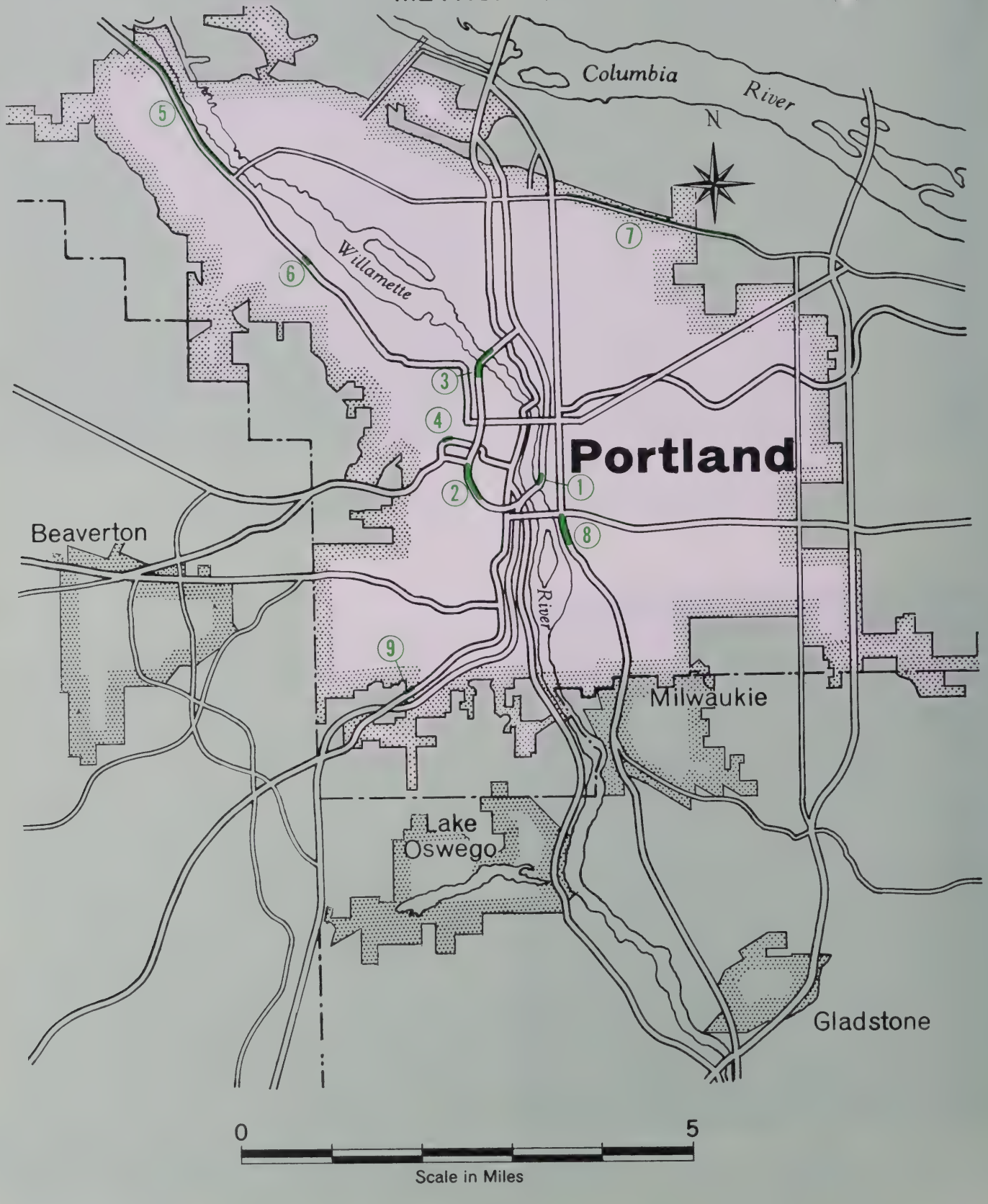
This division also maintains two traffic line striping crews, three sign crews, and one electrical crew to handle all maintenance of traffic signals and illumination.

The soils and geology section is busy the year-round, checking causes of landslides, drilling test holes for foundations, core drilling for rock samples and gathering soil samples.

DISTRIBUTION OF HIGHWAY CONTRACT WORK

DIVISION
1967
1968

METROPOLITAN SECTION



METROPOLITAN DIVISION

Route Number	*Map Reference Number*	*Project Name*	*Type of Construction*	*Construction Cost*	*Number of Contracts Awarded*
I-5	1	East Marquam Interchange	Roadside Improvement	$ 141,000	1
I-405	2	S.W. Montgomery-S.W. Broadway	Roadside Improvement	121,000	1
I-405	3	Fremont Bridge	Piers	4,345,000	1
I-405	3	Willamette River-N.W. Johnson Street	Storm Sewer and Building Demolition	420,000	1
US 26	4	Vista Ridge Westbound Tunnel	Grading, Paving, Structures and Tunnel	4,234,000	1
US 30	5	W. City Limits-St. Johns Bridge	Roadside Improvement	27,000	1
US 30	6	Kittridge Ave., Portland	Channelization	148,000	1
US 30 Alt.	7	N.E. 8th Ave.-N.E. 60th Ave. (Portland)	Grading and Paving	837,000	1
99E	8	Ross Island Br. and Milwaukie Ave. U'xing	Bridge Extension and U'xing Replacement	733,000	1
99W	9	MP 4.5 Barbur Blvd.	Retaining Wall	62,000	1

An aerial view of downtown Portland showing completed portions and progress of the Interstate Highway System.

Construction underway on the N.W. Johnson-S.W. Montgomery Section of the Stadium Freeway (Interstate 405).

METROPOLITAN SECTION

Since its formation in 1958, the Metropolitan Division has handled the location and construction of projects in the Portland urban area. It is entirely surrounded by Division I, which supervises and is responsible for maintenance in the entire area.

During the biennium, Metropolitan Division projects included freeways constructed under the Federal Interstate Act of 1956, as well as projects on primary and secondary highways in the urban area. Cost of construction work currently under contract or proposed as a part of the complete interstate system is estimated to be $156 million within the metropolitan area.

The Metropolitan Division performed work on ten location surveys, including the East Portland Freeway (Interstate 205), the Highlands Interchange-Sunset Interchange Section of the Sunset Highway, the Ross Island Bridge-S.E. Reedway Section of McLoughlin Boulevard, and the N.E. 8th Avenue-N.E. 82nd Avenue Section of the Northeast Portland Secondary Highway. Eight construction projects were completed, including two combined grading and structural contracts, one structural contract, one building and building relocation contract, two roadside improvement contracts, one traffic signal contract, and one tunnel and grading contract, at a total construction cost of $13,155,100.

The tunnel contract completed the first stage of the eastbound tunnel through Vista Ridge, which will connect the Sunset Freeway to the Stadium Freeway. A second contract, awarded in February 1968, will complete this tunnel and will also construct the second, or westbound, tunnel. It is expected that the eastbound tunnel will be opened to traffic late in 1968, and the westbound tunnel will open during 1970. A contract will be awarded in the future for construction of the six-lane section of Sunset Freeway connecting the tunnels with the existing freeway at Highlands Interchange.

The S.W. Montgomery-S.W. Broadway Section of the Stadium Freeway was opened to traffic in September 1966. This extended the Stadium Freeway to connections to Montgomery Street at S.W. 12th and 14th Avenues. Late in 1968, the freeway will be extended north to connections to N.W. Irving and Johnson Streets, when the current project (N.W. Johnson-S.W. Montgomery) is completed. Connections will also be provided for east-west traffic via a temporary route from the Stadium Freeway to Canyon Road via 18th Avenue and Jefferson Street.

The west portals of the Vista Ridge Tunnel on the Sunset Highway (US 26) in Portland.

Both levels of the Marquam Bridge were opened in October 1966. This completed the Metropolitan Division's work on Interstate 5, except for a short section immediately south of the Interstate Bridge. The opening of the Marquam Bridge not only made travel through Portland on Interstate 5 much easier and safer, but it also improved local driving conditions. Traffic counts taken shortly after the opening showed a decrease of 15,900 vehicles per day on the Morrison Bridge and of 19,900 on the Steel Bridge. Traffic on Harbor Drive dropped 20,000 vehicles per day after the opening. The latest count on the Marquam Bridge indicates that 52,000 vehicles are using it daily.

Included in the East Marquam Interchange contract was completion of the construction of the Eastbank Esplanade. This is a 3,700-foot pedestrian footpath and river front park lying between the Eastbank Freeway and the Willamette River. Access is provided from the foot of S.E. Main Street and from the Morrison Bridge. The area has been extensively landscaped with varieties of evergreen and flowering trees, shrubs, vines and other types of ground cover.

A contract was awarded during February 1968 for construction of the piers for the Fremont Bridge. Other contracts for the superstructure and the east and west interchanges are scheduled for late 1968 and early 1969.

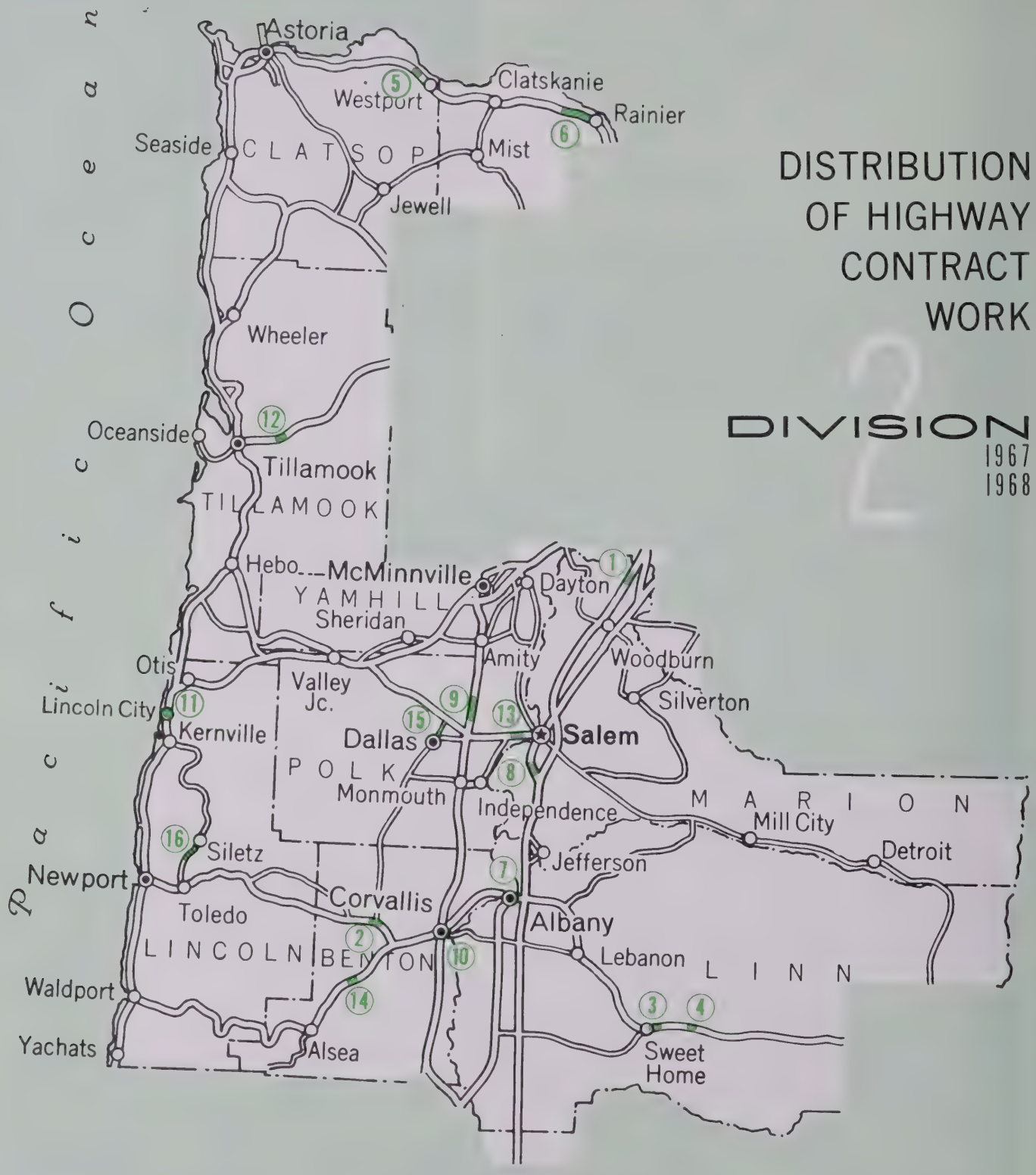
Design work has been completed for widening McLoughlin Boulevard from the Ross Island Bridge to S.E. Reedway, and a public hearing has been held. The right-of-way acquisition for this section has been scheduled. A survey for extending this 4-lane improvement to the Clackamas County line was started in 1968.

During the last half of the biennium, contract work was virtually completed on the upgrading of the Northeast Portland Highway (US 30 Bypass) from N.E. 8th to N.E. 60th Avenues. This work includes widening the highway to four lanes with full shoulders. Future projects will carry this improvement easterly to Sandy Boulevard.

Considerable design and location work was performed during the biennium on the East Portland Freeway (Interstate 205). Agreements for its construction were consummated with the City of Portland and Multnomah County. It is anticipated that the upcoming two-year period should see much of the construction work for this route underway.

Columbia River Bridge between Portland and Vancouver on Interstate 5. The bridge is now toll-free (all toll facilities have been removed), and the old office building serves as a visitor information center.

The east portal of the Vista Ridge Tunnel. This tunnel connects the Sunset Highway to the Stadium Freeway (Interstate 405) and downtown Portland.



DISTRIBUTION OF HIGHWAY CONTRACT WORK

DIVISION

1967
1968

DIVISION II

STATE HIGHWAY CONSTRUCTION PROJECTS

Route Number	*Map Reference Number*	*Project Name*	*Type of Construction*	*Construction Cost*	*Number of Contracts Awarded*
I-5	1	Fargo Interchange	Grading, Paving and Roadside Improvement	$ 245,000	2
US 20	2	Wren (SPRR) O'xing and Marys River Bridge	Structures	338,000	2
US 20	3	Sweet Home-Foster	Grading and Paving	613,000	1
US 20	4	Foster Reservoir	Slide Correction	115,000	1
US 30	5	Wauna Interchange	Grading, Paving and Structure	451,000	1
US 30	6	Delena-Rainier	Grading, Paving, Structure, and R.R. Relocation	4,450,000	3
US 99	7	Cox Cr.-Santiam Jct. (Albany)	Grading and Paving	181,000	1
US 99E	8	Battle Creek	Bridge	110,000	1
US 99W	9	Holmes Gap-Baskett Slough	Grading and Paving	828,000	1
US 99W	10	Seavy St. (Corvallis)	Channelization	65,000	1
US 101	11	25th St.-"D" River (Lincoln City)	Paving	65,000	1
ORE 6	12	MP 6.90 Slide	Slide Correction	268,000	1
ORE 22	13	Independence Jct.-Salem	Slide Correction and Roadside Improvement	384,000	3
ORE 34	14	Alsea Mountain	Slide Correction	134,000	1
ORE 223	15	Polk Station-Dallas	Paving	117,000	1
ORE 229	16	N. Unit, Siletz-Toledo	Grading and Paving	862,000	1

COUNTY ROAD FEDERAL-AID SECONDARY PROJECTS

Route Number	*Project Name*	*Type of Construction*	*Construction Cost*
BENTON COUNTY			
FAS 209	Maxfield Corner-Ward Road	Grading, Oiling and Structure	$170,000
COLUMBIA COUNTY			
FAS 612	Nehalem River (Arcadia)	Bridge	102,000
LINN COUNTY			
FAS 769	Powers Slough	Bridge	40,000
MARION COUNTY			
FAS 741	Silverton Rd.-Sunnyview Ave.	Grading and Paving	221,000
FAS 159	Chemawa Road-Manbrin Drive	Signals	80,000
POLK COUNTY			
FAS 907	Mill Creek	Bridge	108,000
TILLAMOOK COUNTY			
FAS 617	Cape Lookout-Sandlake	Grading	301,000
YAMHILL COUNTY			
FAS 112	Elm St.-17th St. (McMinnville)	Grading and Paving	141,000

SPECIAL $250,000 CITY ALLOTMENT PROJECTS

City	*Type of Construction*	*Construction Cost*
Clatskanie (Fourth Street)	Grading and Paving	$32,000
Dayton	Grading and Paving	29,500
Detroit (Santiam Ave.)	Grading and Paving	14,700
Hubbard (Third Street)	Grading and Paving	29,000
Lafayette (Monroe Street)	Grading and Paving	26,700
Philomath (Ninth Street)	Grading and Paving	25,500
Silverton (Main Street)	Grading and Paving	13,000
Sweet Home (Long Street)	Grading and Paving	36,600
Turner (Fourth Street)	Grading and Paving	18,600
Waldport (Mill Street)	Grading and Paving	24,000
Yachats (Third Street)	Grading and Paving	26,000

DIVISION II

Division II occupies the northwesterly portion of the state except for the area surrounding Portland. It includes the northern 167 miles of the Oregon Coast Highway and an equivalent amount of Pacific Ocean shoreline with its attractive sandy beaches. There are 27 state parks adjacent to this section of highway, of which six offer overnight accommodations.

These recreational areas–augmented by county and federal parks and a wide variety of water facilities for fishing, boating and swimming–attract great numbers of people from the metropolitan areas of Portland, Salem, and the central Willamette Valley, as well as out-of-state visitors.

The eastern portion of the division contains sections of the scenic North and South Santiam Highways. In this area, parks, lakes, mountain camps and trails attract tourists in the summer, while in the winter the great attraction is snow sports.

Improved alignment on the Murphy Hill Section of the Salmon River Highway between Salem and Lincoln City.

Railroad overcrossing widening project near Wren in Benton County on US 20.

The central portion of this division includes the Salem, Corvallis, and Albany population centers and is served by the heavily traveled Pacific, Pacific East and Pacific West Highways. Eighty-three miles of Interstate 5 (Pacific Highway) traverses Division II from north to south.

Although the above emphasizes recreational and governmental activities, this division contains a sizeable portion of other leading occupational activities, such as logging, manufacturing of timber products, farming, and food processing. All of these activities cause seasonal fluctuations in traffic volumes. The greater volume occurs in the summer season, creating traffic problems.

The major accomplishment in Division II during the biennium was completion of the trans-Columbia River Astoria

Slide correction at Mile Post 6.90 on the Wilson River Highway. The slide was a result of damage caused by the 1964 Christmas flood.

Lancaster Drive widening to four lanes from Sunnyview Avenue to Silverton Road in Marion County near Salem.

Bridge, financed by a $24,000,000 bond issue. The State of Washington cooperated in the construction. The structure was opened to toll traffic July 29, 1966. On the same date, a four-vessel trans-Columbia River ferry service operated by the State of Oregon since June 1, 1946, was terminated.

Ferry service other than on a charter basis began at this location in 1921 by Captain F. S. Elfving of North Beach Ferry Company, Inc. Service was then provided by a ten-car capacity ferry boat named "Tourist No. 1". The state acquired operation of the service from the original company in 1946 at a cost of $163,000. The four vessels replaced by the bridge were "Tourist No. 2", "Tourist No. 3", "M. R. Chessman" and "Kitsap"; their automobile capacities were 22, 24, 44, and 32, respectively. The "M. R. Chessman" had an over-all length of 180 feet with a 50-foot beam. It was built for the State of Oregon and launched December 10, 1947, at a cost of $473,294; it was sold for $300,000 upon completion of the bridge. The sale of these vessels put the Highway Commission completely out of the ferry business. Many years ago, before bridges were constructed at the sites, there were two other locations within the division where ferry service was provided by the state. These locations were at Yaquina and Alsea Bays.

Within the division, construction and location activities were supervised by fifteen resident engineers and their crews. During the biennium, construction projects included office buildings, parks, rest areas, roadside improvement projects, special city allotment contracts, county road projects, slide corrections and highway improvements.

Office buildings were constructed at Corvallis and Salem, completing a two-year program that provided new offices for all Maintenance Superintendents in the division. The division office was moved from the main Highway Office Building to the new East Salem Highway Office Building. Park buildings and other park facilities were added or replaced at Beverly Beach, Fort Stevens, Ecola, Holman, Yaquina Bay, and Detroit Lake.

Rest areas along Interstate 5 were constructed at the Santiam River and at Wilsonville, making a total of three modern and highly utilized rest areas on Interstate 5 in this division. The third area is located at Oak Grove near Harrisburg. The southbound portion of the Wilsonville Rest Area features a grove of official state trees from the 50 states in the Union. A group of trees from the 13 original colonies is featured. Becauseof the wide climatic variance of the states, there have been a few substitutions for trees not suited to the climate in this area.

Roadsides were planted and improved in Corvallis, West Salem and McMinnville; on the Columbia River Bridge Approach; at the Fargo Road Interchange; on the Salem Bypass and at the 12th Street Junction in Salem; at the Independence Junction near West Salem; the Orchard Heights-Edgewater Street, the Grande Ronde-Willamina, the Newberg-Dundee, and the Tillamook-Washburn Sections.

Special city allotment projects were constructed at Philomath, Lyons, Sweet Home, Detroit, Turner, Aurora, Lafayette, Dayton, and Amity. Such projects are limited to cities under 5,000 population and $25,000 of city allotment funds.

Nine sections of county roads on the federal-aid system

New alignment and reconstruction on the North Unit, Siletz-Toledo Section of the Siletz Highway.

were improved, including three bridges, the largest of which was the Cline Bridge crossing of Pudding River near Mt. Angel. Traffic signals were contracted on North River Road in Keizer north of Salem.

Of the nine slide correction projects, four were to correct damages from the Christmas 1964 and January 1965 floods.

Nine of the 22 roadway improvement projects were on sections of the eight routes crossing the Coast Range. Five of these were on the Columbia River Highway. They were located one each on the Burnside-Big Creek Section, the Big Creek-Rock Creek Section and at the Wauna Interchange, and two on the Delena-Rainier Section. A surfacing contract remains to be completed on the latter section. The other projects completed major improvements to the Alsea Mountain Section of the Alsea Highway, the Toledo-Pioneer Mountain Section of the Corvallis-Newport Highway, the Murphy Hill Section of the Salmon River Highway, and the Little North Fork Nehalem River-Humbug Summit Section of the Sunset Highway.

Interchanges were constructed at Fargo Road on Interstate 5 and Joseph Street on the North Santiam Highway. Overlays were placed on the Polk Station-Dallas Section of Highway 223 and on the Oregon Coast Highway in Lincoln City. A rock

Construction on the Mt. Angel-Silverton Section of the Hillsboro-Silverton Highway in Marion County. County.

Slide correction project west of Salem near Eola on State Highway 22.

production project was completed in the vicinity of Cloverdale. Urban sections were constructed at Seavy Road in Corvallis, Sweet Home-Foster Section, and Cox Creek-Santiam Junction Section in Albany on US 20; and Orchard Heights-Edgewater Street in Salem on Highway 221. The Willamette River-Orleans Section of the Corvallis-Lebanon Highway and the Mt. Angel-Silverton Section of the Hillsboro-Silverton Highway were other major projects completed. The North Unit, Siletz-Toledo Section of the Siletz Secondary and the Holmes Gap-Baskett Slough Section of the Pacific West Highway will be completed shortly after the end of the biennium.

Of the twelve bridge projects, four were for completion of

Fargo Road Interchange on Pacific Highway (Interstate 5) in Marion County.

Reconstruction underway on the Delena-Rainier Section of the Columbia River Highway in Columbia County.

the Astoria Bridge. Two bridges on the Corvallis-Newport Highway portion of US 20 near Wren were widened. The Vesper Bridge on the Nehalem Secondary Highway was completed. The Yaquina Bay and Sam Reed Bridges were painted. An old timber box culvert on Battle Creek south of Salem was replaced with a short bridge, and a traffic signal was erected on Fourth Street in Tillamook. An infestation of teredos in the foundation piling on the Alsea Bay Bridge necessitated emergency repairs followed by contract work for permanent repair.

The Bureau of Public Roads replaced a box culvert over Sardine Creek on the North Santiam Highway and started construction of US 101 northerly from Neskowin.

In addition to construction and location, the Division Engineer and his staff supervise the maintenance of approximately 1,371 miles of state highways. To assist in these duties, three District Maintenance Superintendents and a Bridge Superintendent with headquarters at Astoria, Salem, and Corvallis are charged with keeping the highways and bridges in their districts open and in good repair. They are aided by 39 section crews.

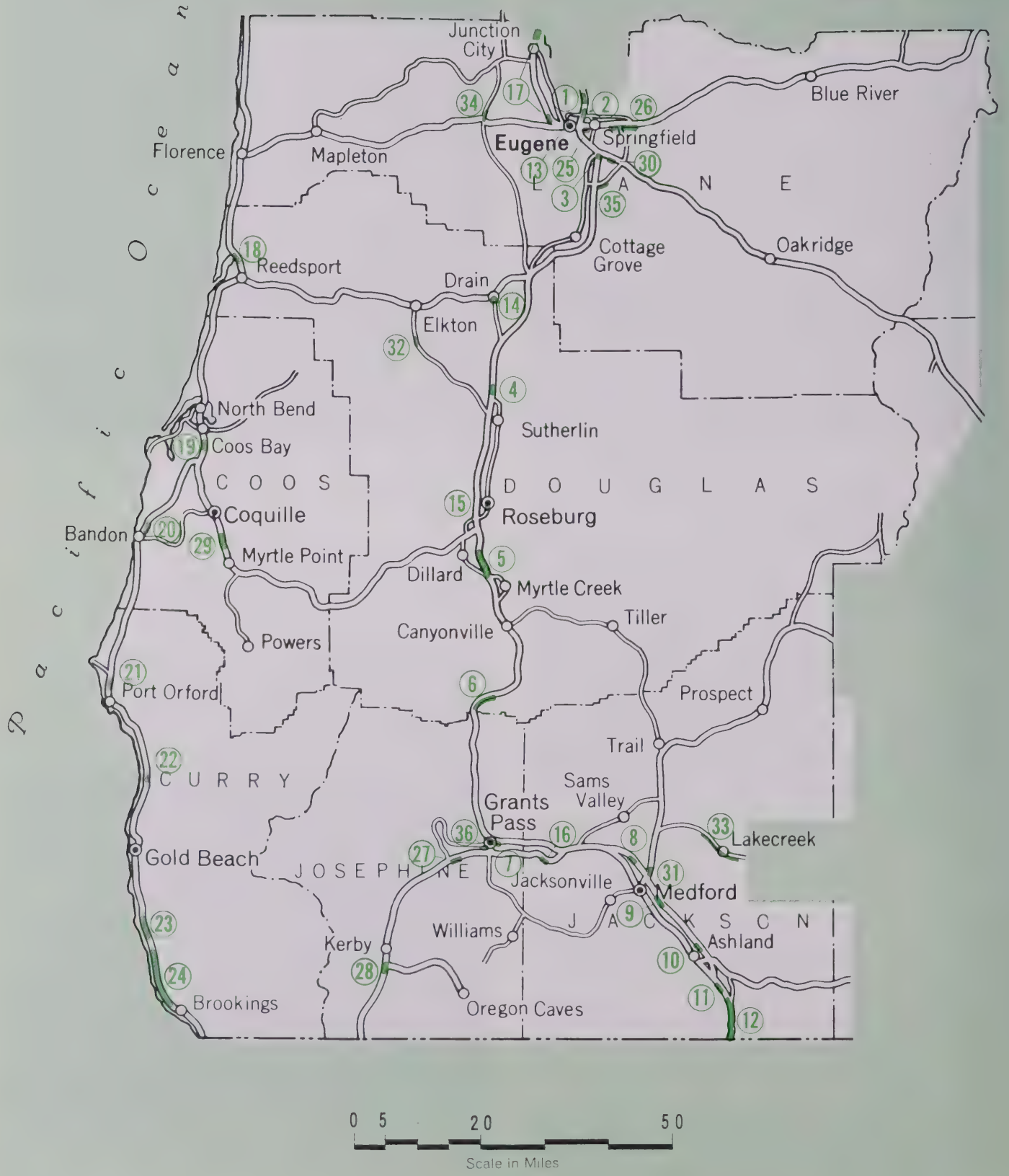
Routine maintenance continued as usual. This work included patching, shoulder blading, ditch cleaning, slide correction, brush cutting, clearing drainage channels, bridge maintenance, shoulder sterilization, signing, striping, sanding, and snow plowing.

Betterment projects were undertaken as time and funds permitted; e.g., shoulder widening, left-turn refuges, access control, and bridge widening. The largest betterment project was extension of four lanes through Lincoln City on US 101.

Realignment of the Pacific West Highway in Polk County eliminates two dangerous curves at Holmes Gap.

DISTRIBUTION OF HIGHWAY CONTRACT WORK

DIVISION 3
1967
1968



DIVISION III

STATE HIGHWAY CONSTRUCTION PROJECTS

Route Number	*Map Reference Number*	*Project Name*	*Type of Construction*	*Construction Cost*	*Number of Contracts Awarded*
I-5	1	Coburg Interchange	Illumination	$ 46,300	1
I-5	2	Belt Line Rd. Interchange	Grading, Paving, Structures and Roadside Improvement	2,111,000	3
I-5	3	Goshen Interchange	Roadside Improvement	62,300	1
I-5	4	Cabin Cr. Safety Rest Area	Channel Improvement and Test Well	27,000	2
I-5	5	Roberts Mtn.-Myrtle Cr.	Rest Area and Roadside Improvement	251,000	4
I-5	6	Azalea-Glendale Jct.	Roadside Improvement	182,700	1
I-5	7	N. and E. Grants Pass Interchange	Roadside Improvement	292,000	1
I-5	8	Central Point Interchange	Illumination	23,000	1
I-5	9	Barnett Rd.-Bear Creek	Screen Planting	22,000	1
I-5	10	Suncrest Safety Rest Area	Improvement	260,000	1
I-5	11	Neil Creek Slide	Slide Correction	44,000	1
I-5	12	Neil Cr.-California Line	Roadside Improvement	57,000	1
I-105	13	Willamette River Bridge	Grading, Paving and Structures	2,437,000	1
US 99	14	Elk Cr. (Drain) Bridge	Grading, Paving and Structure	295,000	1
US 99	15	N. Hill-Deer Cr. (Roseburg)	Grading, Paving and Structure	427,000	1
US 99	16	Depot St. Intersection (Rogue River)	Signing and Illumination	8,200	1
US 99W	17	Harrisburg-Eugene	Screen Planting	25,000	1
US 101	18	Gardiner Hill	Guard Rail	12,000	1
US 101	19	Coos Bay-Davis Slough	Grading and Paving	97,000	1
US 101	20	Coquille R. (Bullards Bridge)	Bridge Repair	198,000	1
US 101	21	Elk River Section	Grading, Paving and Structure	1,246,000	1
US 101	22	Ophir Safety Rest Area	Improvement	40,000	1
US 101	23	Myers Cr.-Burnt Hill	Paving	187,000	1
US 101	24	Burnt Hill Cr.-Lone Ranch Cr.	Culvert Invert Paving	90,000	1
US 126	25	Willamette R. Bridges (Springfield)	Illumination	22,000	1
US 126	26	19th St.-E. City Limits (Springfield)	Grading and Paving	1,900,000	1

Continued on Page 78

STATE HIGHWAY CONSTRUCTION PROJECTS (Continued)

Route Number	*Map Reference Number*	*Project Name*	*Type of Construction*	*Construction Cost*	*Number of Contracts Awarded*
US 199	27	Applegate R.-Wilderville	Grading and Paving	450,000	1
US 199	28	Cave Junction	Grading and Paving	241,000	1
ORE 42	29	Glen Aiken Cr.-Gray Cr.	Grading and Paving	1,600,000	1
ORE 58	30	Coast Fk. Willamette River Overflow Bridge	Structure	38,000	1
ORE 62	31	Biddle Rd. (Medford) Interchange	Grading, Paving, Structure, Signing and Illumination	670,000	1
ORE 138	32	S. Umpqua R. (Smith) Bridge	Grading, Paving and Structure	798,000	1
ORE 140	33	Brownsboro-Hanley Ranch	Grading, Paving and Structure	1,914,000	1
St. 200	34	Long Tom R. (Elmira) Bridge and Long Tom R. North Overflow Bridge	Two Structures	245,000	2
St. 222	35	Coast Fk. Willamette R. Bridge	Grading, Paving and Structure	458,000	1
St. 260	36	W. City Limits-S.W. 3rd St. (Grants Pass)	Grading and Paving	161,000	1
I-5		Wolf Creek-Medford	Screen Planting	21,000	1

COUNTY ROAD FEDERAL-AID SECONDARY PROJECTS

Route Number	*Project Name*	*Type of Construction*	*Construction Cost*
COOS COUNTY			
FAS 250	16th St.-Central Blvd. (Coquille)	Grading and Paving	$200,000
FAS 804	S. Fork Coquille River (Broadbent)	Bridge	213,000
JACKSON COUNTY			
FAS 277	Neil Creek Bridge	Structure	18,000
FAS 287	S. Fork Reese Cr.-Reese Cr. Summit	Paving	110,000
LANE COUNTY			
FAS 860	West Belt Line O'xing (SPRR)	Structure	120,000
FAS 934	Long Tom River (Clear Lake Road)	Structure	169,000
FAS 360	Willamette River (Belt Line Road)	Structure and Grading	532,000
FAS 859	Lane Community College (30th Ave.) Interchange	Grading, Paving and Structure	580,000

SPECIAL $250,000 CITY ALLOTMENT PROJECTS

City	*Type of Construction*	*Construction Cost*
Creswell (1st Ave. and "C" Ave.)	Grading and Paving	$28,000
Gold Hill (5th Ave.)	Grading and Paving	21,800
Canyonville (S.W. 4th St.)	Grading and Paving	19,500
Glendale (Montgomery Ave.)	Grading and Paving	20,000
Jacksonville ("E" Street)	Grading, Paving and Structure	25,300
Powers (2nd Ave.)	Grading and Paving	27,000
Sutherlin (Calapooya Street)	Grading and Paving	16,800
Talent ("I" Street)	Grading and Paving	18,400
Veneta (Dunham Ave.)	Grading and Paving	25,000

Pacific Highway (Interstate 5) in Josephine County crossing over Stagecoach Pass.

The Cow Creek Safety Rest Area in Douglas County was the dedication site to commemorate opening Interstate 5 from the Washington state line to the California state line.

DIVISION III

Situated in the southwest corner of the state, Division III comprises six counties; i.e., Lane, Douglas, Coos, Curry, Josephine and Jackson. The topography varies considerably from ocean beaches to high mountain passes. Mostly forested and agricultural in nature, this area is beginning to attract industry, particularly in the Eugene-Springfield area in the north and in the Medford-White City area in the south. Tourism as an industry is becoming more of a factor each year, and this area is particularly attractive to the tourist, offering a limitless number of recreation sites and interesting historical locations.

Nearly two-thirds of Oregon's portion of Interstate 5 traverses this division from north to south. The dedication of Interstate 5 was held October 22, 1966 in the Cow Creek Safety Rest Area. The most outstanding projects completed just prior to the dedication encompassed Canyon Mountain and Stage Coach Pass between Canyonville and Grants Pass.

With increased emphasis placed on beautification, eleven contracts were awarded involving roadside improvements, rest area improvements, and screen planting. Over-all, eighteen contracts amounting to $3,127,300 were awarded and completed on Interstate 5 during this biennium.

In addition, five contracts were awarded on US 99. The most appreciated projects were on the Elk Creek (Drain) Bridge Section and the North Hill to Deer Creek Section in Roseburg. When complete, the latter section will provide four lanes of traffic from Garden Valley Road to the southerly edge of Roseburg and will improve access to the North Umpqua County Road.

Nine contracts amounting to $762,000 were completed on the Oregon Coast Highway. A major construction problem arose when a bridge over the Coquille River near Bandon was struck by a barge, causing extensive damage to the bridge piers. Through traffic was detoured around the structure by way of the Coquille-Bandon Highway to Coquille then along Highway 42 to the junction of US 101. The bridge maintenance crew immediately made temporary repairs, enabling traffic to use the bridge; a contract was then let for permanent repair of the structure.

Other work along the Oregon Coast Highway involved 4.7 miles of paving on the Myers Creek-Burnt Hill Section, which widened the existing highway to 40 feet.

Several bridge painting projects were completed during the biennium. These projects enhanced the appearance and extended the life of structures located throughout Division III.

Several major construction projects were completed or are underway in the Eugene-Springfield metropolitan area. Completion of the 19th Street-East City Limits Section relieved traffic congestion in Springfield. With the completion of the Highbanks-57th Street Section, north of Springfield, traffic now bypasses the downtown Springfield area. Easy access to the heart of Eugene via freeway routes will be available upon completion of a new Willamette River Bridge and the 7th Avenue-Willamette River Section in Eugene. An additional access to the burgeoning Eugene-Springfield area was provided by the interchange constructed during the biennium at the intersection of Interstate 5 and Lane County's Belt Line Road.

The Floras Creek Section of the Oregon Coast Highway (US 101) in Curry County.

A section of the Florence-Eugene Highway was constructed by the Bureau of Public Roads with forest highway funds. This section from Cushman to Hansen Creek runs along the Siuslaw River and affords motorists excellent driving conditions and unobstructed views of the Siuslaw River estuary.

Two projects were completed on the Redwood Highway during this biennium. These projects were for widening and overlaying Applegate River to Wilderville and widening the

Redwood Highway through Cave Junction.

Several projects were completed on the Coos Bay-Roseburg Highway during the biennium. These sections completed the reconstruction of Highway 42 from Coquille to the Douglas County line.

Three projects were completed on the Crater Lake Highway. The most notable was the Antelope Road-Medford Section, which provides four-lane travel from Medford to White City. Another project in this area completed during the biennium was the Biddle Road Interchange. This interchange enables traffic leaving and entering the freeway to flow more easily onto the completed four-lane Crater Lake Highway and provides city traffic access to Interstate 5.

Completion of the South Umpqua River (Smith) Bridge Section during this biennium removed the last bottleneck on the Elkton-Sutherlin Highway.

The Brownsboro-Hanley Ranch Section was contracted in 1967. Upon completion of this project, the Lake of the Woods Highway will be another step closer to becoming the main traveled highway from the southern valley over the Cascades and into the Klamath Falls area.

Additional projects were completed on highways throughout Division III. These projects include improvements to city streets, upgrading of county roads, and replacing outdated structures. One of the larger contracts was the West City Limits to Southwest 3rd Street Section in Grants Pass. This project enables traffic to flow more freely from the downtown Grants Pass area.

Seven county road federal-aid secondary projects located in Coos, Douglas, Jackson and Lane Counties were completed during this biennium. Most notable were the Willamette River-Belt Line Road structure in Lane County, the Bolon Island to Jack Franz Slough structures in Douglas County, and the 16th Street to Central Blvd. (Coquille) project in Coos County.

Each year maintenance in Division III becomes a larger task. Added surface areas must be sanded, swept, striped, and patched. Also, increased travel in Oregon creates a litter problem. Additional landscaping and roadside planting require more sprinkling, weeding, pruning, mulching and spraying. This work has been eased through use of the "Green Thumb" program.

Powers Junction on State Highway 42 in Coos County.

Opening of permanent rest area facilities at South Umpqua, Cow Creek, and Suncrest broadened the scope of maintenance. These modern installations require daily care during the tourist season and regular care in the off season. Good maintenance of these facilities, with an eye to cleanliness, is a courtesy to the user. Many favorable comments have been received from Oregonians as well as out-of-staters regarding the fine rest areas provided by the State of Oregon.

A program of spot improvement has continued throughout the biennium, resulting in betterment of the horizontal alignment and widening of danger areas. This program provides a more driveable road without the expense of full reconstruction. The constant changes in the highway system require that the maintenance program be flexible and malleable in order to meet these changes as they arise.

Location work throughout Division III continued at a steady pace. Upon its completion, the Crater Lake Highway to Brownsboro project will provide a pleasant trip from the Medford area to Klamath Falls. Location surveys are underway to improve Highway 42 from Interstate 5 to Camas Valley. Smaller projects are underway to alleviate needs on the state highway system.

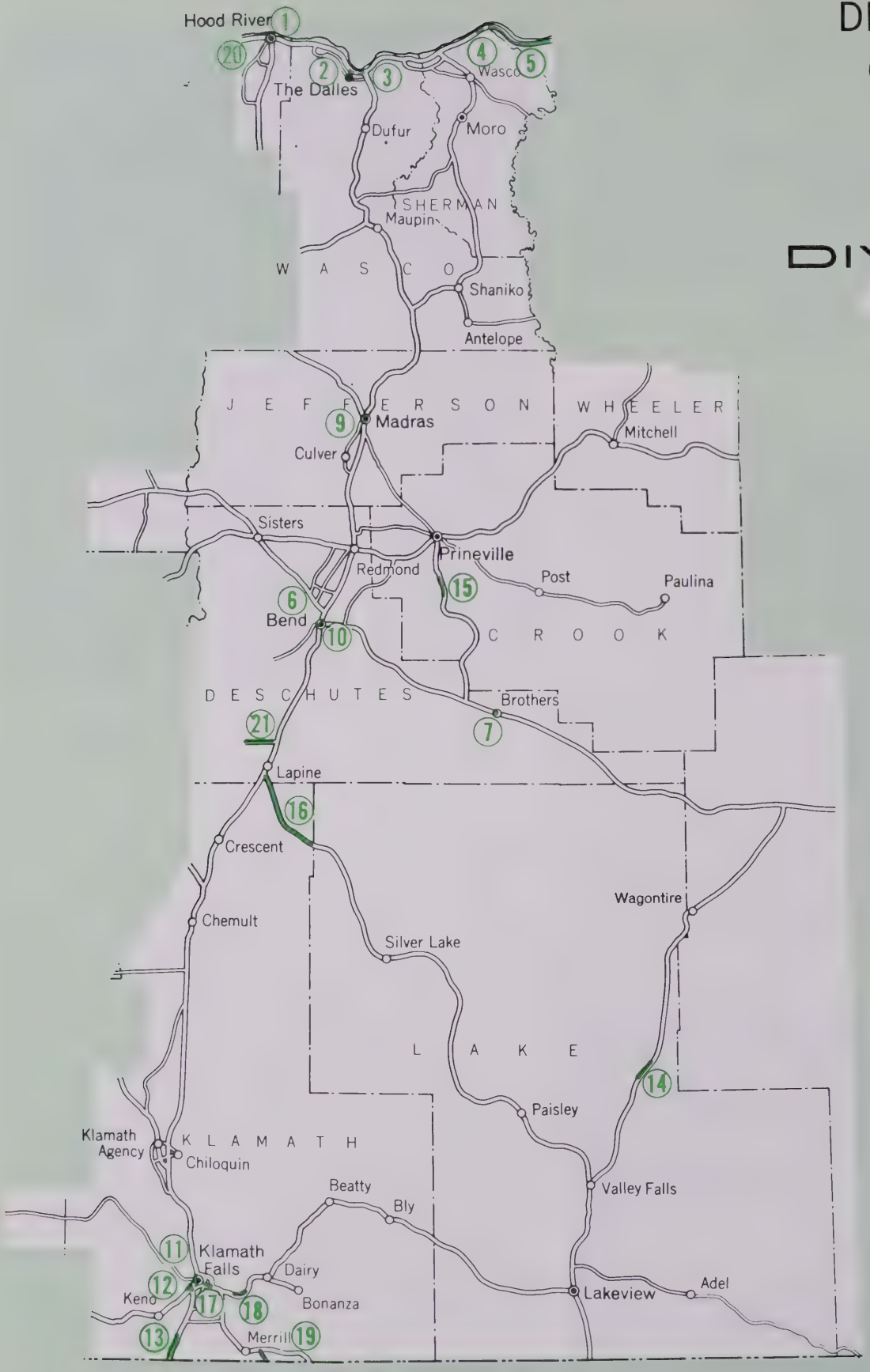
The past biennium proved to be fruitful as no major storms or floods were encountered. This allowed construction and maintenance operations to proceed normally, enabling the motoring public to enjoy new and improved driving conditions throughout the division.

A modern reconstructed section of the Eugene-Springfield Highway at the Mohawk Road Interchange in Lane County.

DISTRIBUTION OF HIGHWAY CONTRACT WORK

DIVISION 4

1967
1968



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Scale in Miles

DIVISION IV

STATE HIGHWAY CONSTRUCTION PROJECTS

Route Number	*Map Reference Number*	*Project Name*	*Type of Construction*	*Construction Cost*	*Number of Contracts Awarded*
80N	1	2nd St. Interchange (Hood River)	Illumination	$ 19,000	1
80N	1	E. Hood River Interchange	Roadside Improvement	50,900	1
80N	2	Brewery Grade Interchange	Illumination	21,500	1
80N	3	The Dalles Bridge	Roadside Improvement	111,400	1
80N	4	Rufus Interchange	Roadside Improvement	19,200	1
80N	5	Rufus-Arlington	Roadside Seeding	15,000	1
US 20	6	Bend	Grading, Paving and Signals	230,000	3
US 20	7	Brothers Oasis Safety Rest Area	Rest Area	97,600	1
US 97	9	Pine St.-"L" St. (Madras)	Paving	50,000	1
US 97	10	Central Oregon Canal (Bend) Bridge	Structure	57,800	1
US 97	11	Main St. Connection (Klamath Falls)	Grading, Paving, Structures and Illumination	400,000	2
US 97	12	Link R.-Green Springs Interchange	Grading, Paving and Structures	3,527,000	1
US 97	13	Worden-California State Line	Grading and Paving	387,000	1
US 395	14	Hogback Summit	Grading and Paving	480,000	1
ORE 27	15	Swartz Canyon Rd.-Rocky Canyon	Grading and Oiling	396,000	1
ORE 31	16	La Pine-Shevlin Camp Rd.	Grading and Paving	895,000	1
ORE 39	17	Washburn Way-S. 6th St.	Guard Rail	19,000	1
ORE 140	18	USRS "B" Canal (Olene) Bridge	Structure	75,000	1
ORE 39	19	Merrill Jct.-California State Line	Paving	88,000	1
St. 281	20	Indian Creek	Grading and Paving	342,700	1
Park Access	21	La Pine State Recreation Area	Grading, Oiling, Structure and Park Facilities	694,000	3

COUNTY ROAD FEDERAL-AID SECONDARY PROJECTS

Route Number	*Project Name*	*Type of Construction*	*Construction Cost*
DESCHUTES COUNTY			
FAS 853	Squaw Creek Bridge	Structure	$ 32,000
FAS 330	C.O.I. Canal Bridge	Structure	32,000
FAS 691 and 692	C.O.I. (Ward and Gosney) Canal Bridges	Structures	65,000
HOOD RIVER COUNTY			
FAS 873	Paasch Rd. RR O'xing	Structure	90,000
JEFFERSON COUNTY			
FAS 660	Fly Lake-Grandview School	Grading	159,000

Continued on Page 84

COUNTY ROAD FEDERAL-AID SECONDARY PROJECTS (Continued)

Route Number	*Project Name*	*Type of Construction*	*Construction Cost*
LAKE COUNTY			
FAS 807	Drake Creek-Warner Hwy.	Base and Oiling	149,000
SHERMAN COUNTY			
FAS 666 and 668	Kent Section	Grading and Oiling	101,000
WASCO COUNTY			
FAS 704	Willowdale Jct.-Antelope Creek	Grading, Base and Structure	162,000

SPECIAL $250,000 CITY ALLOTMENT PROJECTS

City	*Type of Construction*	*Construction Cost*
Dufur (First Street)	Paving	$25,000
Metolius (Butte Avenue)	Grading and Oiling	15,500

The Columbia River Highway (Interstate 80N) at the mouth of the Deschutes River. The Deschutes River State Park lies in the foreground.

DIVISION IV

Division IV is situated in the central portion of the state, averaging approximately one hundred miles in width and extending from the State of Washington on the north to the States of California and Nevada on the south. This section, known as Central Oregon, varies from rolling wheat fields in the north, timbered mountains along the west, range land in the central part, and a sage-covered high desert—home of the nation's largest antelope herds—in the southeastern area.

The area is well-known for its recreation facilities. Numerous lakes in the central and western areas continue to draw increasing numbers of vacationists in the summer, and expanding ski areas attract an increasing number of recreationists to the area in the winter.

Agriculture is limited to irrigated lands. Logging and cattle ranching comprise the remainder of the major industries.

During this biennium, the final segments of federal-aid Interstate Route 80N within this division were opened to traffic. Concrete surfacing on The Dalles Bypass Section was completed in December of 1966, and grading and surfacing of the section from Big Eddy (just easterly of The Dalles Dam) to Rufus was completed in March of 1967.

The Corps of Engineers completed temporary surfacing of the Quinton to Blalock Section in November of 1966. Final asphaltic concrete surfacing on the Rufus-Blalock project will be placed subsequent to completion of the John Day Dam and raising of the pool.

Contracts were awarded during this biennium for roadside improvement projects on the East Hood River, The Dalles Bridge, and Rufus Interchanges. Illumination contracts were completed at the 2nd Street Interchange (Hood River) and at the Brewery Grade Interchange (The Dalles).

The program of widening and overlaying existing roads in the division continued, with an expenditure of approximately $1,630,000 for this purpose during the biennium. The largest of these projects was a 16.9-mile section on the Fremont Highway from La Pine to Shevlin Camp Road. This project was completed in November of 1967 at a cost of approximately $895,000.

The largest construction project contracted during this biennium was for the grading, paving and structures on the Klamath Falls to Green Springs Interchange Section of The Dalles-California Highway. This contract was awarded in November of 1967 and will cost approximately $3,500,000. This project will provide a four-lane facility on new alignment, with completion expected by the summer of 1969.

Improvement of the Lakeview-Burns Highway continued with the award of a contract for grading and paving the Hogback Summit-Pike Ranch Section. This project provides an extension to the Harney County Line-Hogback Summit Section, which was contracted during the last biennium.

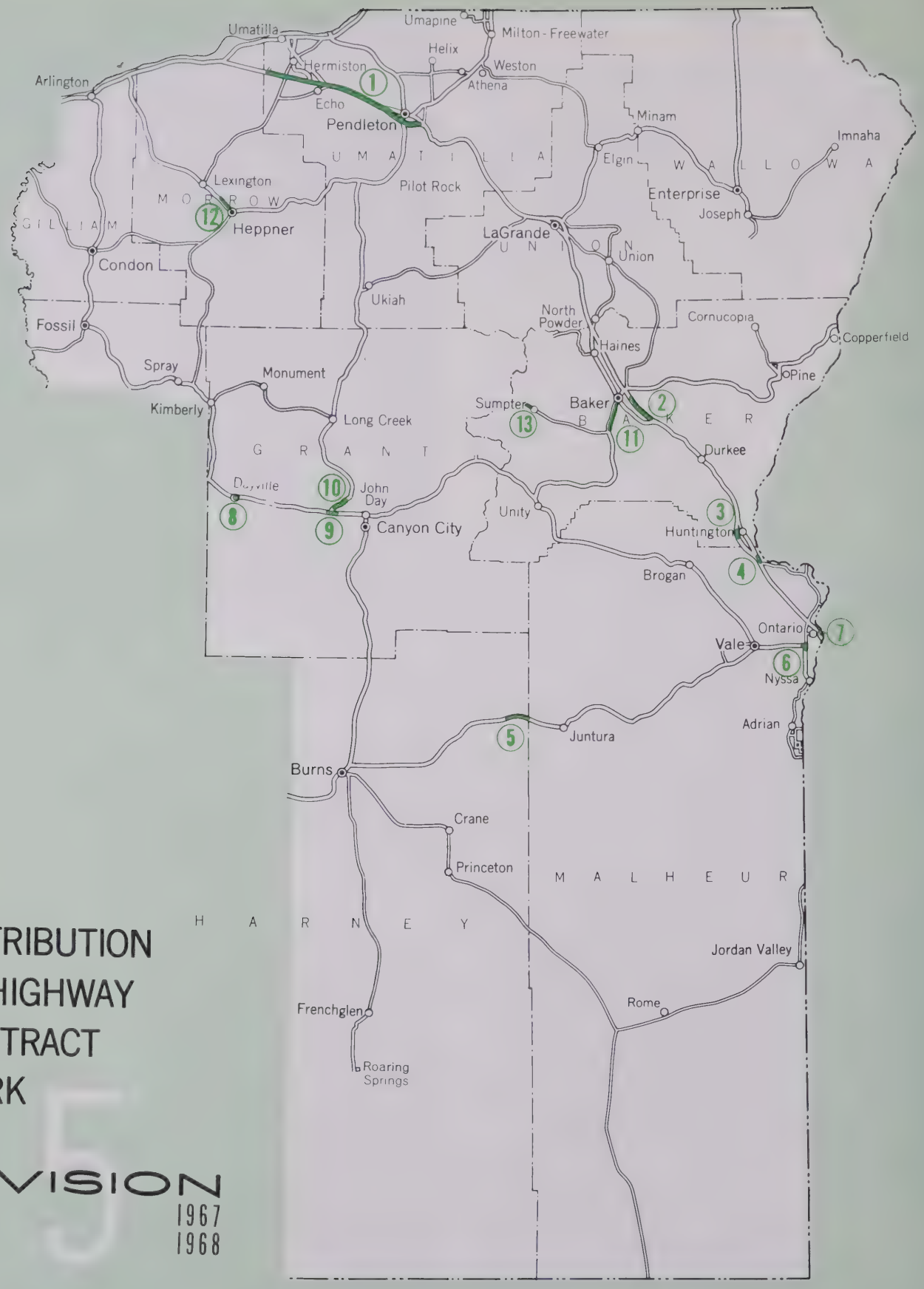
Highway maintenance functions contributed substantially to the progress within the division during this biennium. Thirty maintenance crews supplemented the construction program by performing small betterment projects, such as widening and paving shoulders, spot safety improvements, intersection channelizations, and adding mailbox turnouts. These projects were distributed over the approximately 1,800 miles of highways within the division and were accomplished in addition to the regular maintenance duties of these crews.

During this biennium, snow removal from five ski area access roads and parking lots was performed by division highway maintenance crews.

Four-lane construction of the Columbia River Highway (Interstate 80N), near Rufus, in Sherman County. The John Day Dam is shown in the background.

Winter maintenance requires storage of sanding material at strategic locations for sanding snow- and ice-covered highways. New sand storage sheds were constructed at Bennett Pass on the Mt. Hood Highway, at Santiam Summit on the Santiam Highway, and near Winoga Butte Road on the Cascade Lakes Highway.

The Big Eddy-Celilo Section east of The Dalles on Interstate 80N. The embankment for westbound traffic lies in the Columbia River.



DISTRIBUTION OF HIGHWAY CONTRACT WORK

DIVISION 5

1967
1968

0 5 20 50
Scale in Miles

DIVISION V

STATE HIGHWAY CONSTRUCTION PROJECTS

Route Number	*Map Reference Number*	*Project Name*	*Type of Construction*	*Construction Cost*	*Number of Contracts Awarded*
I-80N	1	Morrow Co. Line-Pendleton	Grading, Paving, Structures and Rest Area	$19,902,000	5
I-80N	2	S. Baker Interchange-Encina	Grading and Paving	2,324,000	1
I-80N	3	Durbin Creek Road	Structure	183,000	1
I-80N	4	Olds Ferry Truck Scale Site	Grading and Paving	115,000	1
US 20	5	Drinkwater Pass-Malheur County Line	Grading and Paving	495,000	1
US 20	6	Cairo Jct. Safety Project	Grading and Paving	125,000	1
US 30N	7	Snake R. (Ontario Spur) Bridge	Structure, Grading and Paving	963,000	1
US 26	8	Dayville Section	Structure, Grading and Paving	345,000	1
US 26	9	John Day (Mt. Vernon)	Bridge	177,000	1
US 395	10	Little Beech Creek-Mt. Vernon	Grading, Oiling and Structures	1,205,000	2
ORE 7	11	Baker-Salisbury	Pave Shoulders	49,000	1
ORE 74	12	Bunker Hill Road-Heppner	Grading and Paving	282,000	1
ORE 220	13	McCulley Fork-Sumpter	Grading and Oiling	258,000	1
I-80N		Boardman Interchange	Illumination	36,000	1

COUNTY ROAD FEDERAL-AID SECONDARY PROJECTS

Route Number	*Project Name*	*Type of Construction*	*Construction Cost*
BAKER COUNTY			
FAS 506	Powder River (McDougall Lane)	Bridge	$ 61,000
GILLIAM COUNTY			
FAS 921	Rock Creek (Wolf Hollow)	Bridge	39,000
MALHEUR COUNTY			
FAS 23-106	Bully Cr. Res.–Vale-West Hwy.	Grading, Oiling and Structure	262,000
FAS 23-108	Halliday	Bridge	96,000
UMATILLA COUNTY			
FAS 911	Umatilla River (Westland)	Bridge	116,000
FAS 911	Hermiston-Meadow Valley Interchange	Paving and Structures	250,000
UNION COUNTY			
FAS 919	Lower Willow Creek	Bridge	43,000
WALLOWA COUNTY			
FAS 487	Wallowa River (Creamery)	Bridge	93,000

SPECIAL $250,000 CITY ALLOTMENT PROJECTS

City	*Type of Construction*	*Construction Cost*
Arlington (Cottonwood Street)	Grading and Paving	$30,000
Haines (Third Street)	Grading and Paving	23,800
Milton-Freewater (Broadway)	Grading and Paving	46,000
Mt. Vernon (Ingle Creek Road)	Grading and Paving	24,000
Pilot Rock (East Birch Creek)	Bridge	22,000
Pilot Rock (West Main Street)	Bridge	26,000
Umatilla ("D" St. and 5th Ave.)	Grading and Paving	24,500
Vale (Oregon St.)	Grading and Paving	24,700

DIVISION V

Division V is located in the eastern part of the state and, within its boundaries, encompasses over three-eighths of the area of Oregon. Over a fourth of Oregon's state highway mileage traverses this area, even though only seven percent of the state's population resides there.

Diverse scenic attractions within the division contribute to the status of Oregon as the "Pacific Wonderland". The topography of this division varies from vast, rolling wheat lands along the plateau south of the Columbia River to relatively barren, sage-covered high deserts in the southeastern corner of the state; from flat, green irrigated valleys to rugged, deep canyons and gorges along portions of many of the same streams; from the weather-worn Blue Mountains to the rough granite faces of the Wallowa and Elkhorn peaks and the gigantic Steens Mountain; from large lakes formed by Owyhee, Brownlee, McNary and other dams, to clear, high lakes nestled among snow-covered mountain peaks.

Most of the industry and economy of the region is oriented toward phases of three major businesses of the state: agriculture, lumbering, and tourism. Over the past years, the economy and the population of this area has experienced a slow but steady growth and is expected to continue at the same rate in the future.

Along the route of Interstate 80N, four sections of the freeway presently open to traffic are (1) a 58-mile segment from Blalock, at the west end of the division, to the Umatilla

North Huntington Interchange on The Old Oregon Trail (Interstate 80N) in Baker County.

Beginning four-lane construction on the Stanfield Junction-Pendleton Section of Interstate 80N in Umatilla County.

Relocation of The Old Oregon Trail (Interstate 80N) at Farewell Bend on the Snake River in Malheur County.

River approximately twenty miles west of Pendleton; (2) a 33-mile segment from the top of Emigrant Hill east of Pendleton to La Grande; (3) a 23-mile segment from Baker to Durkee; and (4) a 33-mile segment from south of Lime to the Idaho State line east of Ontario. Included in this freeway is the first section of continuously reinforced concrete pavement placed in this division–the 7.5-mile portion of the Lime-Malheur County Line Section opened to traffic in November 1967.

Several contracts for work on the interstate system were awarded during the biennium, including three on which work was completed. The completed projects include a structure for a county road crossing near Huntington; the Stanfield Safety Rest Area, to provide another welcome rest spot for the motorist; and a weigh station for eastbound trucks near Olds Ferry. A 2.3-million dollar project is underway, extending the freeway 1-1/2 miles nearer Baker and adding two lanes to the existing two-lane freeway between Baker and Encina. Three contracts totaling almost 18.6 million dollars were awarded last summer and fall that will extend the freeway from the Umatilla River to a connection with the existing highway east of Pendleton, a distance of 25 miles.

On the John Day Highway, new construction provides a better entrance to Dayville and replaces the bridge damaged during the 1964 Christmas floods. A narrow bridge over the John Day River west of Mount Vernon was replaced with a modern structure.

A four-mile section of the Central Oregon Highway was reconstructed between Drinkwater Pass and the Malheur County line, providing a wider modern segment of this highway. At Cairo Junction, the old "Wye" connection was replaced with modern channelization and delineation under a safety improvement contract.

Two contracts on the Pendleton-John Day Highway have provided a new facility for the southerly five miles of this highway between Little Beech Creek and Mount Vernon.

Motorists using the Heppner Highway now have an improved facility on which to travel for the first three miles north of Heppner, the result of a reconstruction project built in the fall of 1966.

A new structure to alleviate a bottleneck to the free flow of traffic over the Snake River on the Ontario Spur of the Olds Ferry-Ontario Highway was contracted jointly by the States of Idaho and Oregon for eastbound traffic. The existing structure carries westbound traffic entering Oregon. Also completed were the widening and reconstruction of the highway between the Idaho Avenue Interchange and the Snake River.

In the Grande Ronde Valley, two crossings of Catherine Creek and one of the Grande Ronde River were improved when the narrow steel truss bridges were replaced with reinforced concrete bridges.

The Sumpter Valley Highway now has an all-weather surface following reconstruction of three miles of this highway between McCully Forks and Sumpter. This improvement reduces the mileage of unoiled or unpaved roads on the state highway system.

In this division, 31 maintenance section crews and nine bridge, sign and extra gang crews performed their job of serving the motoring public by keeping 2,300 miles of state highways, including two dozen mountain summits, in good traveling condition. In addition to the patching, sanding and snow plowing operation normally associated with highway maintenance, these crews managed to widen over 120 miles of highways and shoulders, pave or oil approximately 34 miles of shoulders, as well as construct numerous turnouts to provide a place for a vehicle to stop outside the normal driving lane. Spot improvements, ranging from inexpensive signs to widening of the roadbed, were accomplished at various locations where records indicate an abnormal number of vehicle accidents.

Twin structures over Willow Creek near Heppner Junction on the Columbia River Highway (Interstate 80N) in Gilliam County.

INCOME AND

EXPENDITURES

Funds that are available to the Highway Commission for construction, maintenance and operation of the highway system, and for the development and operation of the state parks system, come from the State Highway Fund. This fund, which is held in the State Treasury, is deemed and held as a trust fund and may be used only for the purposes authorized. The Highway Commission is required, by law, to submit a biennial budget estimate and must limit expenditures from the highway fund to the budget amount approved by the legislature.

INCOME

Basically, income to the highway fund is derived from two sources: one by state taxation on gasoline, diesel fuel, the licensing of motor vehicles and operators, the assessment of motor carrier fees on commercial vehicles, and revenue from the sale of authorized highway bonds; the other is from federal sources that make funds available to the various states by means of the federal-aid highway acts that have been enacted by each Congress since 1916. Federal monies are obtained by taxation of gasoline and diesel fuels, tax on tires, tubes and tread rubber, tax on trucks, buses and trailers, and a commercial vehicle use tax. The use of federal funds is limited to construction or reconstruction. They are used in conjunction with state funds on a matching basis, and their use is supervised and controlled by the federal Bureau of Public Roads. All states are dependent on these federal funds to finance new work, and highway construction activity in the United States would be small, indeed, without this source of revenue. Federal funds are made available on a reimbursement basis. The state pays for the construction cost in the first instance and is later reimbursed for those items of cost that the government deems eligible.

Prior to 1956, Congress provided federal monies by appropriations from the general fund; but starting in July 1956, they created what is known as the Federal Highway Trust Fund. This fund is composed of the income from federal taxes on motor fuels; taxes on sales of new trucks, buses and trailers; taxes on tires, inner tubes and tread rubber; and an annual heavy vehicle use tax. Expenditures from this fund are limited to payments to the states for the federal share of federal-aid highway construction and for general administrative expenses of the Bureau of Public Roads. It is the responsibility of the Secretary of the Treasury and the Secretary of Transportation to make frequent estimates of the amounts available in this fund; and, when it appears that there are insufficient monies in the fund to cover congressional authorizations to the states, it is their responsibility to reduce the states' apportionments to a level that the trust fund can finance. This has been accomplished by administrative action on the part of the Bureau of Public Roads by apportioning lesser amounts of federal monies to the states than was authorized, and by setting up a system of contract controls which limits the amount of federal-aid work that the states can place under contract in any quarter.

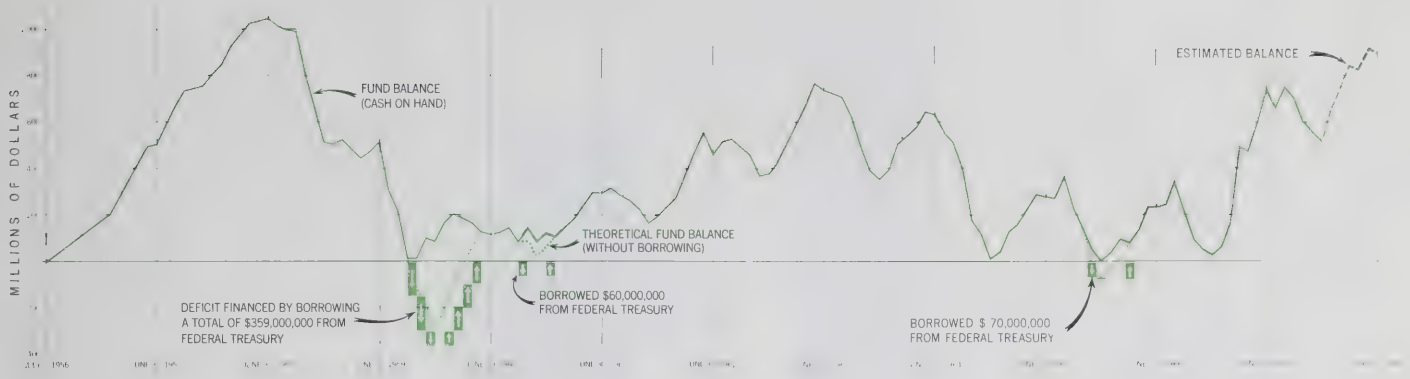
The Federal Highway Act of 1956, as amended in subsequent years, has authorized appropriations for the interstate highway system for a 16-year period in the amount of $42,168,500,000. All states have prepared a new estimate of cost required to complete the system which was submitted to Congress in January 1968. Upon approval of this new estimate by Congress, apportionments for completion of the system will be considered. The 1968 cost estimate of the 41,000-mile interstate highway system is 56.5 billion dollars.

For the fiscal years 1960 through 1966 Interstate Funds were apportioned to the various states in the ratio that the total cost of completing the system in a particular state bears to the total cost of completing the entire system. Beginning with fiscal year 1967, funds are apportioned in the ratio that the federal share of the cost of completing the system in a particular state bears to the federal share of completing the entire system. Beginning with the fiscal year 1970 appropriation, Oregon will receive approximately 2.2% of Interstate Funds.

STATE REVENUE TO HIGHWAY FUND

License Fees	$14,110,000	
Fuels Tax	60,913,000	
Transportation Fees	19,685,000	
Fines	175,000	
Total Motor Vehicle Revenue		$94,883,000
Interest on Highway Funds	$ 725,000	
Misc. Co-op. (Army Engrs., Idaho, etc.)	1,060,000	
Astoria Bridge Revenue	775,000	
Park User Fees	700,000	
Misc. Sales & Rentals Fees	132,000	
Total Miscellaneous State Revenue		$ 3,392,000
Total State Revenue		$98,275,000

FEDERAL HIGHWAY TRUST FUND



COMPOSITION OF FEDERAL HIGHWAY TRUST FUND

Name of Tax	*Present Total Rate*	*Rate Prior to 1956*	*Federal-Aid Program Increase or Decrease*	*Under Present Legislation Total Rate After 10/1/72*	*Percent to General Fund*	*Percent to Highway Trust Fund*
Gasoline ..... (per gallon)	$.04	$.02	$.01– 7/1/56 $.01–10/1/59	$.015		100%
Diesel and Special Fuels ..... (per gallon)	$.04	$.02	$.01– 7/1/56 $.01–10/1/59	$.015		100%
Lubricating Oil ..... (per gallon)	$.06	$.06		$.06	Prior to 1/1/66 100%	Begin 1/1/66 100%
Automobiles ..... (percent of manufacturer's sales price)	7%	10%	7%–5/15/65 6%– 1/1/66 7%–3/15/66 2%– 4/1/68 1%– 1/1/69	1%	100%	
Trucks, Buses and Trailers* .... (percent of manufacturer's sales price)	10%	8%	2%– 7/1/56	5%		100%
Parts, Accessories† ..... (percent of manufacturer's sales price)	8%	8%		5%	Prior to 1/1/66 100%	Begin 1/1/66 100%
Tires ..... (per lb.)	$.10**	$.05	$.03– 7/1/56 $.02– 7/1/61	$.05		100%
Inner Tubes ..... (per lb.)	$.10††	$.09	$.01– 7/1/61	$.09		100%
Tread Rubber ..... (per lb.)	$.05	None	$.03– 7/1/56 $.02– 7/1/61	None		100%
Motor Vehicle Use Tax*† ..... (per 1,000 lbs.)	$3.00	None	$1.50– 7/1/56 $1.50– 7/1/61	None		100%

*House trailers and school buses exempt.
†Tax on truck and bus parts and accessories only after 1/1/66. Tax on auto parts and accessories repealed 1/1/66.
**The $.03 and $.02 increase effective July 1, 1956 and July 1, 1961 applies to tires for highway vehicles only.
††The $.01 increase effective July 1, 1961 applies to inner tubes for highway vehicles only.
*†Applicable to entire gross weight when vehicle exceeds 26,000 gross weight. Buses in local transit service exempt.

FEDERAL-AID HIGHWAY AUTHORIZATIONS

1956 Act as Amended

(Thousands of Dollars)

Fiscal Year	National Authorization			Oregon's Share	
	Interstate	*A.B.C.*	*Total*	*Interstate*	*A.B.C.*
1957	$1,000,000	$ 125,000	$1,125,000	$13,576	$ 1,862
1958	1,700,000	850,000	2,550,000	23,079	12,663
1959	2,200,000	1,275,000	3,475,000	29,510	18,738
1960	2,500,000	900,000	3,400,000	43,108	13,347
1961	2,000,000	925,000	2,925,000	30,882	12,379
1962	2,200,000	925,000	3,125,000	37,530	12,215
1963	2,400,000	925,000	3,325,000	41,570	12,863
1964	2,600,000	950,000	3,550,000	45,034	13,073
1965	2,700,000	975,000	3,675,000	46,529	13,255
1966	2,800,000	1,000,000	3,800,000	48,498	13,799
1967	3,000,000	1,000,000	4,000,000	52,037	13,796
1968	3,400,000	1,000,000	4,400,000	59,215	13,889
1969	3,800,000	1,000,000	4,800,000	66,082	13,854
1970	3,600,000*				
1971	3,600,000*				
1972	2,688,500*				

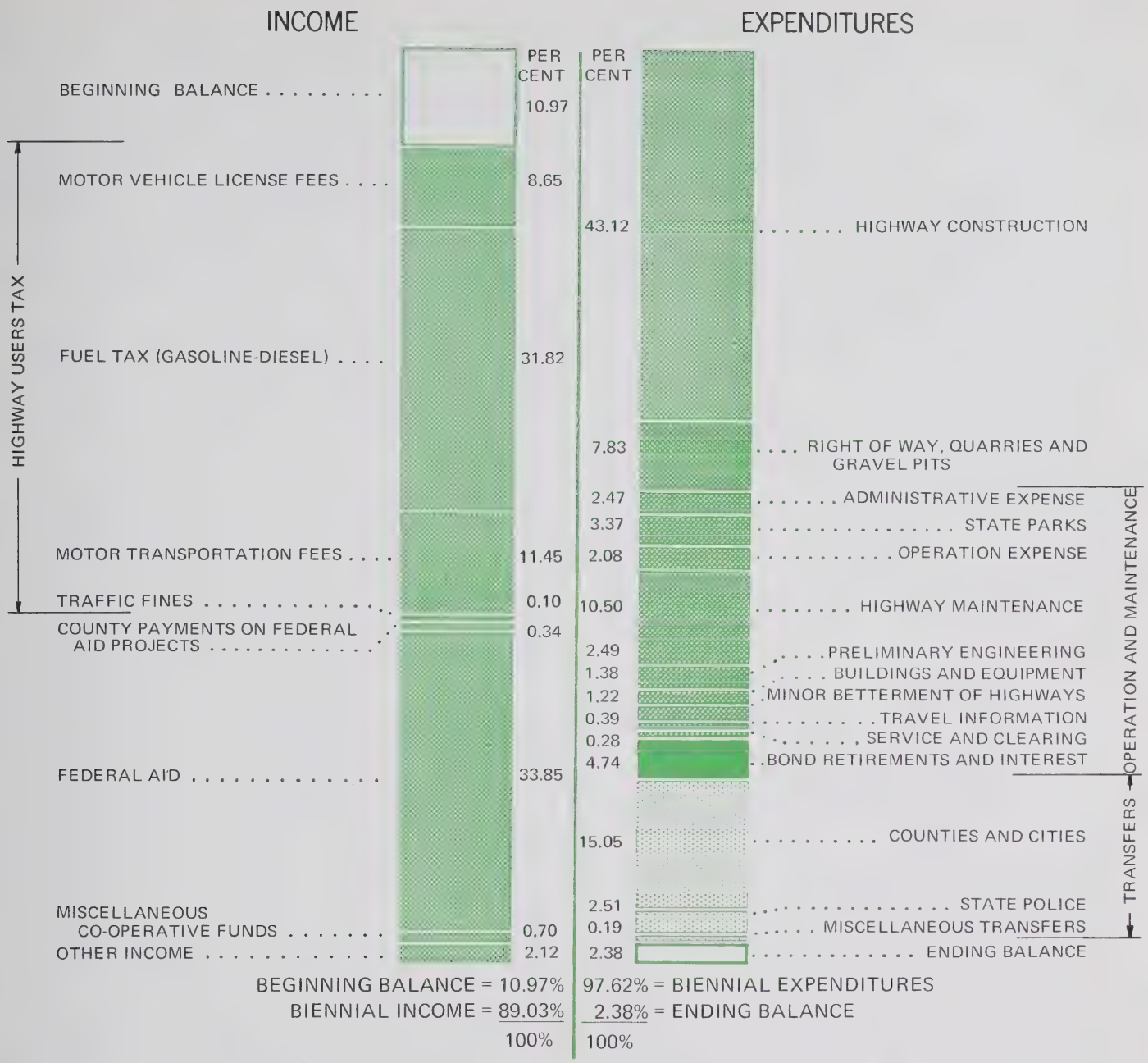
*Approximate amount as exact apportionment has not been announced.

Federal funds for noninterstate federal-aid highways, which are commonly referred to as the ABC system, are usually provided every two years by Congress. At present, the national authorization is $1,000,000,000 for each of the fiscal years 1968 and 1969, with Oregon's share being about 1.4% of the total. Federal law provides that 45% of the authorization go on the primary system, 30% on the secondary system, and 25% on urban extensions of primary and secondary systems within urban areas. Primary funds are apportioned to the various states on the basis of 1/3 on the state's population ratio, 1/3 on the state's area ratio, and 1/3 on the state's post road mileage ratio. Secondary funds are apportioned on the basis of 1/3 on the state's rural population ratio, 1/3 on the state's area ratio, and 1/3 on the state's post road mileage ratio. Urban funds are apportioned on the basis of the state's urban population ratio.

DISBURSEMENTS

The major item of expenditure is highway construction. This expenditure is eligible for federal aid, and the state is reimbursed up to the amount of the federal share. Construction expense includes expenditures for contract work on the federal interstate and ABC systems; beautification projects; and the state, bond and city allotment construction projects.

The cost of acquiring rights of way, quarries, gravel pits, and other real properties has become a major activity of the Department. Complications and difficulties relative to this procedure are increasing as our state grows and develops. The cost of right of way is eligible for federal aid as long as certain federal regulations are rigidly followed. It is the practice, at present, to request federal aid on all interstate highway right


INCOME
EXPENDITURES
PER CENT
PER CENT
BEGINNING BALANCE 10.97
MOTOR VEHICLE LICENSE FEES 8.65
FUEL TAX (GASOLINE-DIESEL) 31.82
MOTOR TRANSPORTATION FEES 11.45
TRAFFIC FINES 0.10
COUNTY PAYMENTS ON FEDERAL AID PROJECTS 0.34
FEDERAL AID 33.85
MISCELLANEOUS CO-OPERATIVE FUNDS 0.70
OTHER INCOME 2.12
HIGHWAY USERS TAX
43.12 . . . . . HIGHWAY CONSTRUCTION
7.83 . . . . RIGHT OF WAY, QUARRIES AND GRAVEL PITS
2.47 . . . . . ADMINISTRATIVE EXPENSE
3.37 . . . . . STATE PARKS
2.08 . . . . . OPERATION EXPENSE
10.50 . . . . . HIGHWAY MAINTENANCE
2.49 . . . . PRELIMINARY ENGINEERING
1.38 . . . . . BUILDINGS AND EQUIPMENT
1.22 . . . MINOR BETTERMENT OF HIGHWAYS
0.39 . . . . . TRAVEL INFORMATION
0.28 . . . . . SERVICE AND CLEARING
4.74 . . BOND RETIREMENTS AND INTEREST
OPERATION AND MAINTENANCE
15.05 . . . . . COUNTIES AND CITIES
2.51 . . . . . STATE POLICE
0.19 . . . . . MISCELLANEOUS TRANSFERS
2.38 . . . . . ENDING BALANCE
TRANSFERS
BEGINNING BALANCE = 10.97%
BIENNIAL INCOME = 89.03%
100%
97.62% = BIENNIAL EXPENDITURES
2.38% = ENDING BALANCE
100%

INCOME

JULY 1, 1966 TO JUNE 30, 1968 ESTIMATED

Beginning Balance		$ 37,078,381
Motor Vehicle License Fees	$ 29,232,619	
Fuel Tax (Gasoline-Diesel)	107,487,319	
Motor Transportation Fees	38,702,540	
Traffic Fines	340,963	
Subtotal (Highway Users Tax)		$175,763,441
County Payments on Federal Aid Projects		1,154,098
Federal Aid		114,367,923
Miscellaneous Co-operative Funds		2,357,599
Other Income		7,158,405
Total Income		$337,879,847

EXPENDITURES

JULY 1, 1966 TO JUNE 30, 1968 ESTIMATED

Highway Construction		$145,685,855
Right of Way, Quarries and Gravel Pits		26,471,586
Administration Expense	$ 8,353,677	
State Parks	11,384,610	
Operation Expense	7,014,101	
Highway Maintenance	35,477,773	
Preliminary Engineering	8,423,037	
Buildings and Equipment	4,666,969	
Minor Betterment of Highways	4,110,785	
Travel Information	1,323,183	
Service and Clearing	944,217	
Bond Retirements and Interest	16,011,772	
Subtotal (Operation and Maintenance)		$269,867,565
Counties and Cities	$50,849,075	
State Police	8,491,896	
Miscellaneous Transfers	625,087	
Subtotal (Transfers)		$ 59,966,058
Ending Balance		8,046,224
Total Expenditures		$337,879,847

of way; but on ABC system right of way, federal aid is sought only on the major projects. There are never enough federal ABC funds to meet all the demands, and it is felt that the public interest is best served by using these federal monies for construction purposes and using state funds to acquire the small or modest-sized right-of-way projects.

Administration expense consists of those costs incurred in the over-all direction and supervision of the State Highway Department. Included are expenses of the State Highway Commission, the Highway Engineer, the Deputy and Assistant State Highway Engineers, the Legal Division, the Commission's Secretary, and administrative functions of the staff engineers, department heads, and division engineers.

State parks expenditures include the administration, acquisition, development and operation of the State Parks and Recreation Division.

Operation expense represents the cost of truckload inspection and issuance of permits, cost of operating and maintaining the Department and State Police radio systems, cost of conducting planning and traffic surveys, cost of drawbridge operation, and costs incurred in conducting highway research activities.

Highway maintenance expenditures are entirely from state funds, with no federal participation. This cost represents maintenance of roadway, shoulders, structures, snow removal, litter pickup, roadside vegetation control and traffic control facilities.

The major item of expenditure is highway construction. This expenditure is eligible for federal aid, and the state is reimbursed up to the amount of the federal share. Construction expense includes expenditures for contract work on the federal interstate and ABC systems; beautification projects; and the state, bond and city allotment construction projects.

The cost of acquiring rights of way, quarries, gravel pits, and other real properties has become a major activity of the Department. Complications and difficulties relative to this procedure are increasing as our state grows and develops. The cost of right of way is eligible for federal aid as long as certain federal regulations are rigidly followed. It is the practice, at present, to request federal aid on all interstate highway right of way; but on ABC system right of way, federal aid is sought only on the major projects. There are never enough federal ABC funds to meet all the demands, and it is felt that the public interest is best served by using these federal monies for construction purposes and using state funds to acquire the small or modest-sized right-of-way projects.

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Preliminary engineering covers all work necessary to prepare plans and specifications for a highway construction project. Included are reconnaissance, preliminary and location surveys, design of structures, roadbed, surfacing, drainage facilities, preparation of specifications, and other incidental items which may be required prior to actual construction. This item is eligible for federal aid, which is requested on all interstate projects and on the larger ABC jobs.

Building and equipment expenditures include costs of construction, betterment and maintenance of shop, sign and maintenance buildings. The expense of acquiring snowplows, trucks, automobiles, shop radio, parks, office, engineering, laboratory, and blueprint equipment is also included in these costs.

Minor betterments are those items of cost incurred in the installation of traffic signals, reinforcement and repair of pavements, improvement and widening of shoulder areas, and the improvement of bridges and drainage facilities.

At the time bond projects mature, federal aid may be collected on the principal payment provided federal monies are available for programming.

DETAIL OF BOND PAYMENTS

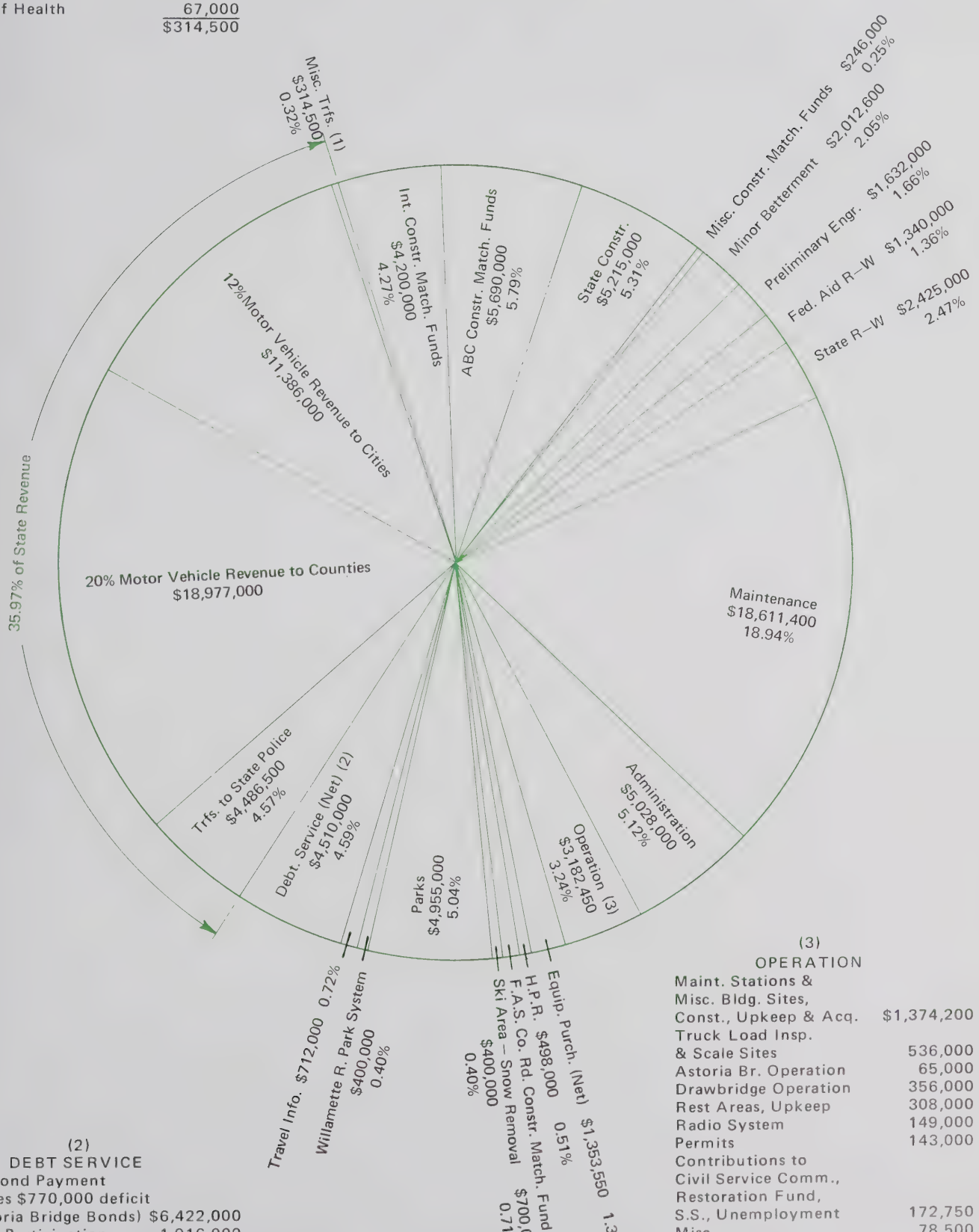
July 1, 1966 to June 30, 1968

Date of Issue	*Payment on Principal*	*Payment of Interest*
$15,000,000 Issue October 1, 1951	$ 1,500,000	$ 112,500
$15,000,000 Issue March 1, 1952	1,500,000	131,250
$10,000,000 Issue March 1, 1953	1,000,000	128,750
$32,000,000 Issue September 1, 1953	3,000,000	33,750
$20,600,000 Issue November 1, 1957	3,000,000	756,000
$20,000,000 Issue January 1, 1962	2,400,000	960,400
$12,000,000 Issue March 1, 1963	800,000	681,600
	$13,200,000	$2,804,250

TYPICAL DISTRIBUTION OF STATE HIGHWAY DOLLARS

(1)
MISC' TRANSFERS

Police Stds. Training Bd.	$ 54,000
Hwy. Interim Committee	12,000
Oregon Historical Society	5,000
Columbia Gorge Comm.	1,500
Marine Facilities	150,000
Public Museums	25,000
Board of Health	67,000
	$314,500


35.97% of State Revenue
Misc. Trfs. (1) $314,500 0.32%
12% Motor Vehicle Revenue to Cities $11,386,000
Int. Constr. Match. Funds $4,200,000 4.27%
ABC Constr. Match. Funds $5,690,000 5.79%
State Constr. $5,215,000 5.31%
Misc. Constr. Match. Funds $246,000 0.25%
Minor Betterment $2,012,600 2.05%
Preliminary Engr. $1,632,000 1.66%
Fed. Aid R–W $1,340,000 1.36%
State R–W $2,425,000 2.47%
20% Motor Vehicle Revenue to Counties $18,977,000
Maintenance $18,611,400 18.94%
Trfs. to State Police $4,486,500 4.57%
Debt. Service (Net) (2) $4,510,000 4.59%
Parks $4,955,000 5.04%
Operation (3) $3,182,450 3.24%
Administration $5,028,000 5.12%
Travel Info. $712,000 0.72%
Willamette R. Park System $400,000 0.40%
Ski Area – Snow Removal $400,000 0.40%
F.A.S. Co. Rd. Constr. Match. Fund $700,000 0.71%
H.P.R. $498,000 0.51%
Equip. Purch. (Net) $1,353,550 1.38%

(2)
DEBT SERVICE

Total Bond Payment (includes $770,000 deficit on Astoria Bridge Bonds)	$6,422,000
Federal Participation	1,916,000
State Funds	$4,506,000

(3)
OPERATION

Maint. Stations & Misc. Bldg. Sites, Const., Upkeep & Acq.	$1,374,200
Truck Load Insp. & Scale Sites	536,000
Astoria Br. Operation	65,000
Drawbridge Operation	356,000
Rest Areas, Upkeep	308,000
Radio System	149,000
Permits	143,000
Contributions to Civil Service Comm., Restoration Fund, S.S., Unemployment	172,750
Misc.	78,500
	$3,182,450

PROJECTED ACTIVITIES

Oregon's income to cover maintenance, operations, state parks, bond service, federal matching monies and state construction is derived from motor vehicle revenue, which the state shares by statute with cities, counties and state police. After the fixed costs are met, a relatively small amount is left for highway improvement. This makes Oregon, in common with most states, very dependent on federal financing to meet the major highway needs.

Projections of future highway activities are intimately related to our needs for the highway system; therefore, our projected activities are considered in conjunction with foreseeable needs and resources. A recent study by the Department has indicated the following needs:

*Interstate System		$ 617,000,000
*ABC System		
Primary	$964,000,000	
Secondary	704,000,000	
Urban	300,000,000	
Not on Federal System . . .	8,000,000	$1,976,000,000

**Updated to July 1, 1968.*

Federal financing for the completion of the interstate system has been committed, but the state must provide its matching funds. It is believed that the interstate system will be completed in 1975, which under present matching ratios calls for an average state expenditure of $6,900,000 per year.

In addition, we face needs on the ABC and state systems of $1,976,000,000, of which $366,000,000 is periodic resurfacing for pavement restoration. It is apparent that not much of an impression can be made on the total needs under our present financing program.

Yields from motor vehicle revenues to the Highway Department will provide the necessary matching money for work on the interstate and ABC systems. However, the amount of money left to devote to state construction will be very limited, ranging from $5,000,000 to $8,000,000 per year. If further diversions from this fund are made, this limited amount will, of course, be reduced accordingly.

Federal apportionment to the ABC system along with state matching money totals about $18,000,000 per year, which when used in conjunction with the minor amount available for a state construction program will result in approximately $25,000,000 a year that can be devoted to stopgap construction and reducing the needs backlog.

This, then, points up our short-range goal, which is completion of the interstate system while maintaining the adequacy of noninterstate highways until such time as a new federal finance plan is implemented.

A national finance plan is being formulated by an AASHO committee with the states advising the amount of matching money that can be expected to be available. This will define the limits within which a distribution formula could be implemented. The Secretary of Transportation has also made a study,

which was furnished Congress on January 31, 1968, in which he probes the national highway needs with relation to the states' ability to finance. This study viewed the growing urbanization of the country and the necessity of devoting substantial sums to meet the transportation problem occasioned thereby. The study pointed out the desirability of creating a new intermediate system having characteristics lying between our present interstate and primary systems, and suggested various matching ratios to secure optimum construction to fit expected funds available, both to federal and state, during fiscal 1975 to 1985.

As the Interstate financing is phased out, it is anticipated some substitution will be made from the infinite range of possible combinations of federal and state matching funds that will come to grips with the highway deficiencies existing on our other systems. The federal study referred to contemplates that 5.8 billion dollars will be available per year in the National Trust Fund in the 1975 to 1985 period. On this basis, the present ABC distribution formula could mean as much as $80,000,000 of federal funds per year for Oregon. With the state matching share, this would permit substantial progress in meeting Oregon highway needs.

In the field of operations, a basic plan has been devised to reduce the number of maintenance stations throughout the state by 40 and to reduce the maintenance manpower by 200. The stations were originally set up to accommodate the productivity of men and machines then existing. Studies have shown a definite increase in productivity due to increased mechanization, communications and mobility, which permits the lane miles maintained per man to be increased. Some adjustment has been accomplished; however, further study during the next biennium adjusting productivity to length of sections maintained is contemplated.

LEGISLATIVE RECOMMENDATIONS

Generally speaking, the statutes under which the Highway Commission operates are adequate. However, it is possible that several areas will need amending or supplementing; e.g.:

1. The statute relating to public prescriptive rights and zoning of the dry sand areas on Oregon's beaches. This will no doubt consist of clarifying the existing statute, the shortcomings of which will become fully apparent by the time the legislature convenes.

2. Oregon's law with regard to the control of outdoor advertising should be made to conform to the standards promulgated by the Secretary of Transportation. These standards are still in the formative stage. Conformance by the state is eventually necessary to avoid being penalized 10% of our apportionment as provided under Public Law 89-285.

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